

which extended about a third of an inch into its substance, it showed no departure from the healthy state. The spleen, pancreas, stomach, intestines, and bladder, were healthy. The mesenteric glands were rather larger than usual. The kidneys were swollen and congested, and their capsules easily stripped off. The bodies of the fifth and sixth dorsal vertebrae had been destroyed, and a partial ankylosis, permitting of some motion, existed. The spinal cord at this part was bent, to suit the angle, but was neither flattened nor compressed. There was no active disease in the bones, but over them lay a mass of enlarged glands, in the centre of one of which softening appeared to be commencing. *The supra-renal capsules.*—The right of these bodies was rather increased in size, and on making a longitudinal section of it, a purulent-looking fluid oozed out from several distinct portions of its interior. Bathed in this fluid were some hardish yellow bodies, the size of peas, much resembling in appearance concrete tubercular matter. These bodies, together with the fluid, were inclosed in a distinct capsule, which was lined by a well-defined membrane. The left capsule was not quite so large as the right, which, however, its condition on section precisely resembled. The bodies found in it were four or five in number, and one of them was as hard as cartilage. Both capsules felt before section soft to the finger, on account of the presence of the fluid within.—*Ibid.*

34. *New Treatment for Itch.*—MM. DESSARD and PILLOX assert that itch may be often cured immediately by painting the body over with chloruret of sulphur dissolved in sulphuret of carbon. The application kills the acari and their eggs. Sometimes it is necessary to repeat the application, as some of the acari, or some of their eggs, may not have been killed by the first.—*Gaz. Hebdom.* Oct. 26, 1856.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

35. *Average Duration of Life in patients with Scirrhus Cancer of the Breast.*—In a lecture delivered at the College of Surgeons about four years ago, Mr. PAGET stated that the average duration of cases of cancer of the breast, when the disease is left to itself, is thirteen months greater than of cases in which the diseased breast is removed by operation. Mr. P. finds that he has fallen in error in this estimate, and in a late number of the *Lancet* (Jan. 19, 1856), he publishes the results of his fuller investigations.

"Records which I have made or collected of 139 cases of scirrhus cancer of the breast, watched to their conclusions, or to their survivals beyond the average duration, give," he remarks, "the following results:—

"In 75 not submitted to operation, the average duration of life, after the patient's first observation of the disease, has been 48 months. In 64 submitted to operation, and surviving its immediate consequences, the corresponding average has been a little more than 52 months. The longest duration of life, in the former class, has been 216 months; in the latter class, 146; the shortest, in the former, was 7 months; in the latter, 7½.

"The proportionate number of the deaths¹ in each year, after the first observations of the disease, may be represented by the following table:—

¹ With the deaths, I have included in this table the numbers of those who are still living beyond the average period. The omission of them would have made no difference in relation to the questions concerning the influence of the removal of the cancerous breast.

	With operation. Per cent.	Without operation. Per cent.
In the first year, there died	4.7	8
" second "	6.25	22.6
" third "	21.8	24.
" fourth "	14.	9.37
" fifth "	20.	7.3
" sixth "	11.	5.3
" seventh "	9.37	9.37
" eighth "	3.12	2.66
" years after the eighth	9.37	12.

"When the extremes of duration are so widely different as they are here shown to be, a perfectly reliable average cannot be obtained, unless the numbers of cases are, on both sides, larger than those supplied by my records.¹ I believe, therefore, that the results here stated are only near the truth, and that the collection of more cases will in some measure alter them.

"Thus, it is nearly certain that the averages stated above are, on both sides, rather too low, for twenty of the patients (*i. e.* one-seventh of the whole number) are, or were, still living, after having survived the average time of duration with the disease. Moreover, as cases of the longest duration are the most likely to be lost sight of before their record is completed, it will generally happen that a collection of cases will include a disproportionately large number of those of short duration. Allowing, however, for these causes of reduction in the calculated average durations of life, there appears no reason to expect that any number of completed and unselected cases will prove an average duration of more than five years from the first observation of the disease.

"The sources of error above referred to would, I think, especially reduce the estimate of the average duration of the cases in which no operation is performed; for unless cases are kept with an express intention of recording all that occur, without any selection whatever, there will be a tendency to omit a disproportionate number of those which are not made interesting, either by operations, or by some of those striking events which are most common in acute cases. Hence, the records will generally contain too few of the most chronic cases in which no operation has been performed. I have expressly avoided this error in my own note-books, by including everything like a selection of cases for record; but I cannot be quite sure that the same rule has been observed in some of the records from which I have derived cases observed by others. I can find, however, no reason to believe that any full and accurate tables of cases will bring out, as a result, that patients in whom cancer of the breast is left to pursue its course, live longer, on an average, than those from whom it is removed. Rather, I believe that, if care be taken in the discrimination of the cases appropriate for the operation, and in the rejection of those that are unfit, there will appear a gradually increasing—though it may be always a small—advantage in favour of the cases in which the breast is removed. Probably it may be ascribed, in some measure, to such care, that the additional and continued cases, which I have tabulated in the last two years and a half, make the average duration in those operated on rather longer, and that in those not operated on rather shorter than it appeared in 1853.

"With regard to the rules that may be observed in the selection of the cases most fit for operation, I may refer to the published lecture; continued observations having only confirmed the statements made therein. I will only refer to one fact, which the table printed above shows—namely, that the proportion of deaths, in the first two years of the disease, is much less in those who are operated on than in those who are left; amounting in the former to less than eleven per cent., in the latter to more than thirty per cent. Such a result, while it justifies the operation in the cases of acute cancers which are not attended with evident cachexia, may be fairly set against the mortality from the operation itself, which I still believe to be not less than ten per cent.

¹ I could have easily made the numbers larger by including doubtful, or only probable, cases of cancer of the breast, but tables so made up seem worse than useless.

36. *Ovariectomy; Tetanus during Recovery; Death.*—Mr. G. M. HUMPHRY records (*Assoc. Med. Journ.*, Feb. 16, 1856) an interesting case of ovarian dropsy in which the operation was followed by tetanus and death. The subject of it was a delicate but apparently healthy woman, 27 years of age, the mother of three children. The abdomen was as large or larger than at the full term of pregnancy, and the tumour presenting every indication of not being adherent. Mr. Humphry operated on the 18th of July, 1855, in the following manner: "She was placed in a reclining posture at the foot of the bed, the legs hanging over. A catheter was introduced, to make sure that the bladder was empty. I made an incision, about three inches long, between the umbilicus and the pubes, through the linea alba into the abdomen. Allowing the bleeding to cease a little, I introduced my finger, and could find no adhesions. Then enlarged the wound to about four inches. The sac bulged into the wound, and I thrust a trocar into it. As the fluid escaped through the canula, the sac presented more and more through the wound; and, presently, during a fit of sickness, the whole was ejected from the abdomen, the parietes of the abdomen collapsing behind it so as to close up the wound and cover in the bowels, rendering very slight pressure sufficient to prevent their protrusion. The fluid continued to flow through the canula; and while the cyst was being emptied, its walls were supported to prevent any dragging. The pedicle was found to be three or four inches wide; a thick tough mass, which seemed to be the hypertrophied round ligament, lying at one edge, and the enlarged Fallopian tube at the other. Moreover, there were several masses near the pedicle, which felt like the uterine. To ascertain the nature of these, we cut open the sac, and found them to be composed of round clusters of secondary cysts growing into the interior of the sac from its wall. There was only one large sac; the depression which led us to suppose there might be more than one being caused by thickening of its wall, and by ridges projecting from it into the cavity. The pedicle was tied in three portions near to the sac (each ligature drawn as tight as I could), and cut through about a quarter of an inch from the ligatures. The end of the pedicle was allowed to remain in the wound, and secured to a roll of lint, so as to prevent its retiring into the abdomen. Some small bleeding vessels in the abdominal wall were secured. The wound was closed by means of sutures passed through the hinder part of the sheath of the rectus and linea alba, close to the peritoneum, and by others through the skin. A compress of lint was placed over the wound, and a flannel many-tailed bandage over the body. She vomited again during the latter part of the operation, and felt sick afterwards. In other respects, she was very comfortable, more so than before we began."

On the 26th the patient was doing so well that Mr. H. took his leave; but

¹ The cyst was thick. Its interior was vascular, with numerous small creases and pits, caused probably by the sudden evacuation of the fluid. There were also several falciform bands in its interior, which had caused the furrows on the surface, and given us the impression of its being trilobular. Growing into it from the lower part, where the pedicle had been attached, were several cysts and cystic masses; also, thick tough bands and thin membranous septa, which were probably the remains of cysts that had burst. On the walls of the great cyst were also several round or oval holes, communicating with cavities extending under the lining of the cyst, and having smooth walls. These were also probably secondary cysts, which had burst through the orifices into the interior of the sac, and collapsed. They looked like ulcers in its wall.

The fluid of the large cyst was like thin coffee. It contained blood globules, abundant cholesterine scales, molecules, delicate granular cells, spherical and elongated. Also, coarsely granular cells or masses of various sizes, looking as if they were formed by the mere aggregation of molecules. The wall of the sac was in many places coated with a thin pellicle of soft brownish substance, with silvery glistening surface. This pellicle was composed, almost entirely, of cholesterine, with brownish molecular masses or cells, and molecules of light specific gravity. The smaller cysts contained a mere glutinous, transparent, pale fluid, with cholesterine scales and some delicate cells. The divided ends of several large arteries and veins were seen in the pedicle.

on that day the patient experienced a little stiffness of her jaws, but supposing it to be from cold, she said nothing about it. The next day, however, the disease became marked, and although at no time were the spasms very violent, still she succumbed on the morning of the 29th.

"On examination, we found the end of the pedicle (a little sloughy, of course, where the ligatures were applied) lying close behind the wound, which afforded a ready vent for any discharge. The immediately adjacent intestines were coated with a small quantity of reddish lymph. There were no other indications of peritonitis. The mesentery, drawn down to the wound, and adherent there, was healthy. The colon was generally rather distended, with points of contraction here and there, but no obstruction. The pedicle had consisted of the entire broad ligament, and was tied near to the uterus; the remaining portion was perfectly healthy, not even more vascular than usual. The uterus also was quite healthy. The right broad ligament was rather vascular, and the ovary was nearly twice its natural size, containing four small thin-walled vascular cysts, with watery fluid in their interior."

Mr. H. appends to this case the following interesting remarks:—

"Some years ago I studied the records of this subject carefully, and made an analysis of all, or nearly, the reported cases of the operation of ovariectomy, for the purpose of making up my mind as to the propriety of performing the operation, and of ascertaining whether, by a judicious selection of cases, more favorable results might not be obtained. I will briefly state the conclusions at which I then arrived.

"The number of instances of the operation that I collected were 105. Of these, in 50, or less than one-half, it was attended with success. In 39, or more than a third, it proved fatal. In 16 it was found impracticable, or useless. Such results are far from satisfactory. When we consider the nature of the disease, that it is not of immediate, nor even of certain, danger to life, and that the unrecorded cases are not likely to be more favourable than those I collected, we are, on the whole, compelled by these statistics to form no very favourable opinion of the past results of the operation.

"The operations appeared generally to have been conducted with much caution, and every attention had been paid to the means likely to insure success. The causes of death (peritonitis being the chief), and the mistakes in diagnosis, were likely to occur again; and it seemed to me that a diminished rate of mortality was to be expected for the future, only, or chiefly, from a more careful selection of cases, and of the kind of operation to be performed.

"I found that the age from 30 to 40 was by far the most favourable; the proportion of fatal results bearing a relation to the deviation above or below that period. The number of deaths above 45, amounting to 9 out of 13, being such as to discourage the attempt to remove an ovarian tumour after the patient has passed the middle age.

"The nature of the tumour was found to have a very marked influence on the result of the operation, as appears from the following table. In many of the cases it was not stated, or stated too vaguely for the information to be made use of.

	Recovered.	Died.
Simple cysts	16	6
Cysts with after-growths—multilocular cysts. Some described as cysts with solid matter; and two containing hair and teeth	13	9
Solid tumours, called fibroids, scirrhuses, or solid or fluid, or solid with cysts	7	10

"The increase of the rate of mortality, in proportion to the solidity of the tumour, was very remarkable. When we add to this the facts, which were fully proved, that solid tumours are more likely to affect both ovaries, to be adherent,¹ to be associated with ascites; that they are, further, more difficult

¹ Of the sixteen instances in which the operation was discontinued on account of extensive adhesions, the tumour is stated to have been solid in six; composed of multilocular or compound cysts in two; of simple cysts in three.

of diagnosis from tumours of other parts,¹ and are commonly of a slower growth, consequently less quickly fatal if left to themselves, there can, I think, be no question as to the propriety of refraining from any attempt to remove them.

"Excluding the instances in which the tumour was solid, and the age of the patient about 45, the successful cases bore a proportion of somewhat more than two to one; an average which, I have no doubt, may, with cautious management, be expected in future, and which is, I think, sufficient to justify, and even to recommend the proceeding.

"With regard to the kind of operation, experience fully proves, what reason would suggest, that the danger is proportionate to the length of the incision. The major operation, as it is called, involving the exposure and handling of the bowels, with greater chances of hemorrhage, has been much more fatal than the minor, when the comparison is made between nearly similar cases. Indeed, if the small incision, that is, an incision of three or four inches, will suffice, and if, by evacuating the contents with the aid of a trocar, the cyst or cysts can be withdrawn, and the pedicle tied, there can be no reason for extending the wound.

"The question of the liability of both ovaries to be the seat of disease is a very important one in estimating the value of an operation for the removal of one; and it is much to be regretted that this had not been more frequently borne in mind by those who have given the descriptions of the *post-mortem* examinations. From the collation of a great many cases, I found that, though both ovaries were liable to be affected with solid growths, and with those numerous small cysts which so often form about the periphery of the gland, yet that the large cysts, the multilocular cysts, and the cysts with after-growths, were, in by far the greater number of instances, confined to one organ. If, therefore, a cure be effected, there would seem to be every probability of its being permanent. I do not remember to have read of any case in which the disease manifested itself in the other ovary after one had been removed; though it is quite possible that such cases have occurred. In several instances, the catamenia are reported to have returned regularly; the patients continuing to enjoy good health, and some have borne children. In my own patient, it has been stated, there were several small cysts in the remaining ovary; but it is by no means clear that these were of the same nature as that of the large one removed, or that they would ever have attained to great size."

37. *Tracheotomy in Croup and other Inflammatory Affections.*—*The Medical Times and Gaz.*, Jan. 26th, contains some highly interesting and useful practical remarks on this subject, by HENRY SMITH, Esq., surgeon to the Westminster General Dispensary.

"The two main obstacles," he remarks, "to success after tracheotomy in croup are, undoubtedly, the existence of inflammatory exudation into the trachea and bronchi below the situation of the artificial opening, together with a congested state of the lungs, in the first place; and secondly, the delay in operating; and it is a point worthy of consideration, whether the first objection may not to a certain extent, be removed by obviating the second, in fact by proceeding to an operation at an earlier period, before the suffocating stage of croup has fairly set in. It is only reasonable and consonant with our pathological knowledge, to suppose that the unfavourable state of the lungs so often found after death, results from the obstruction higher up, and that these organs are rendered the more unfit for duty, in proportion as the disease advances, for it is found after death that in some cases, only one of the inferior lobes is congested or inflamed, whilst in others, when the disease has been more severe and has lasted longer, the greater portion of both lungs may be affected. It is reason-

¹ In each of the seven cases in which the tumour was found not to be ovarian upon opening the abdomen, it is stated to have been solid. Of these five died, one recovered, and in one the tumour, a fibrous growth from the uterus, was successfully removed.

able to suppose that an earlier introduction of air, through an artificial opening, might prevent this, and thus give a larger proportion of cures.

But here we are at once presented with a serious difficulty, the too conscientious appreciation of which may cause all the difference as to the results of the operation in England and in France. It is impossible to decide, except in the very last stage of croup, whether the patient will die or not; almost every practitioner must have met with some remarkable cases of recovery where a fatal result looked imminent, and this is the reason why tracheotomy is not used at an earlier period of the disease. Only a very few weeks ago, I was requested by Dr. Maurice Davis to give my opinion as to the probability of tracheotomy being required in the case of a young girl who had been suddenly seized with the most acute inflammation of the windpipe. I saw her at a period when the disease was at its height, when the distress was great, the sharp brilliant inspiration as well marked as I ever heard it, and where remedies had not had much effect. After consultation the remark was made, that this was a case where, perhaps, to do it any justice the operation of tracheotomy should be performed at once, but at the same time the case was not so bad as not to leave scope for milder measures; the lungs were not much congested, and the general condition of the patient did not correspond with the obstruction in the windpipe; it was decided that the remedies employed, leeches, counter-irritation, and calomel, should be further continued; in a few hours amendment began, and the child recovered. Now if the operation had been done here, the patient would probably have recovered, but we have the certain proof that in this case, at least, it was not required.

Professor Traussan has pointedly insisted upon the necessity of not delaying tracheotomy until it is too late, when in fact the little patient is suffering, not only from the mere distress of dyspnoea, but from the general depression induced by extreme obstruction to the breathing, and by the disorder of which, it may be, this is only a complication; hence it is to be inferred that he operates much earlier than practitioners in this country, for generally it is not until the patient's condition is such as has been referred to, that we feel ourselves warranted in resorting to a measure which, in itself, may hasten death, and only promises a doubtful success.

The operation of tracheotomy in a child, is frequently talked of as though it were one of easy performance, and one devoid of danger; but the number of casualties which have happened during the operation in the hands of experienced surgeons, proves that this is a fallacy. It has fallen to my lot to perform tracheotomy many times in children, varying in their age from eleven months to six years, and this repeated experience has convinced me that it may be one of the most trying and difficult the surgeon has to perform. It is true that in every instance I have laboured under the greatest disadvantages, several operations having been done on great emergency at night time; others, in dark rooms or kitchens, with but little assistance; but still it is for the most part under such disadvantages that we are called on to do tracheotomy, and difficulty should constitute an element in the calculation, as to the operation being warrantable or not.

The paper just published by M. Traussan, valuable and instructive as it is, concerning the mode of performing tracheotomy, the necessary precautions, the minutiae of the process and the after-treatment, is deficient in one point, and that the most important, viz: as to the pathological conditions of the disease for which the remedy is proposed. He only shortly mentions the nature of the malady, speaking of it merely as croup, and using the term 'diphtheritic infection'; it is to be regretted that the actual pathology of the disease so termed, was not distinctly pointed out, and it is to be hoped that this want may be supplied in a future communication from the pen of this distinguished physician.

There is good reason, in the absence of this information, to believe that there is a distinction between the croup in England and in France, for in the majority of cases of the inflammatory disorder in this country, the trachea in its entire length is involved, and partially obstructed by a false membrane more or less dense, whilst in France, it appears that the species of croup termed

diphtherie, and occasionally met with here, frequently attacks children. I have seen one or two well-marked instances following measles; on one occasion I opened the windpipe, on another it was my intention to do so, but the patient died from a sudden attack of dyspnoea before assistance could be brought; in neither of these cases was the trachea affected in any way, but a false membrane was observed in patches on the larynx, fauces, and tongue. It is in such instances, that tracheotomy performed sufficiently early, is not only justifiable, but will probably be successful, and if the cases referred to by M. Trousseau are of the same nature, the reason of the wonderful success of his operations is in a great measure explained.

"Dr. West, in his *Lectures on the Diseases of Children*, has dwelt upon this difference in the pathology of the disease, in the two countries, and has, I suspect correctly, explained the success of the operation in the hands of MM. Bretonneau and Trousseau, by stating that 'in France, croupal symptoms are, in the majority of cases, induced by the extension to the larynx of false membrane, originally deposited on the fauces and soft palate, while the windpipe itself is comparatively seldom in a state of active inflammation, often altogether unaffected; and the bronchitis and pneumonia which, in this country, so often and so seriously complicate the disease, are there of less common occurrence.'

"Although in the several cases of true inflammatory croup, for which I have undertaken tracheotomy, the results have been very unsuccessful, the effect of the operation in two cases of another form of inflammatory disease of the throat in children, has been more encouraging, and has led to the supposition, that life may be not infrequently saved by it. I allude to that condition which is sometimes seen after an attack of scarlet fever, when the glands of the neck become greatly swollen, or the fauces, tonsils, and larynx are affected with a violent inflammation, going on to ulceration and sloughing. These attacks are sometimes seen to occur in a child who has not the specific eruption of scarlet fever upon the skin, during the prevalence of an epidemic, or the throat symptoms become more fully developed after the patient has passed through the acute stage of the disorder. Three such cases have been under my observation in private practice.

"The first was in a little boy, aged 4, who went through the acute stage of scarlet fever favourably: at the termination of this violent engorgement of the tissues of the neck, suddenly, within a few hours, took place, great difficulty both in respiration and deglutition was experienced, and tracheotomy was suggested, but the parents did not seem to wish it, and the symptoms continuing, the child rapidly died.

"The second case was as follows: At 9 P. M., on January 2, 1855, Mr. Watson, of Southampton, requested me to visit with him a little girl, aged 4, who was dying from obstruction to the respiration.

"When I saw her she was almost in the last stage of collapse, the dyspnoea was most distressingly urgent, the face and neck were livid, the lips blue, the external jugular veins were enormously distended, the inspiration was accompanied by a loud and shrill noise, the pulse was almost imperceptible, and death was evidently close at hand. The interior of the throat was in a very bad state, the tonsils were greatly swollen, and with the soft palate, were in an ulcerated and sloughing condition.

"Mr. Watson informed me that the patient had been labouring under scarlet fever for about two weeks: during the course of the disease the throat symptoms were prominent, but had become much more marked as the eruptive stage had declined; for three days previous the dyspnoea had been very severe, but the extreme urgency had existed about six hours.

"Tracheotomy was suggested to the parents, but the case was so unpromising that I hoped they would not concede to it; in fact, I told them that the child might die during the operation, and I felt that if any difficulty arose in all probability death would happen. They wished it to be done. Accordingly, assisted by Mr. Watson, I operated at once, fortunately opening the trachea in a few moments, and without wounding any distended vein; the relief given

was extraordinary, the child breathed with ease, sat up and took nourishment, although before, the difficulty of swallowing was excessive; the countenance became natural, and she fell asleep.

"On the following day the relief continued, and was more marked when a clean double canula was introduced. The child took nourishment well, a strong solution of nitrate of silver was applied by means of a brush to the throat, and she was sedulously watched.

"The relief to the breathing continued for some days, but great care was required to keep the canula unobstructed, by frequent removal and cleansing; the condition of the throat materially improved under the local application of nitrate of silver, and strong stimulants internally. On the morning of the fifth day, the little girl was sitting up in bed, playing with her doll, and although the tongue had become covered with aphthae, strong hopes were entertained that she would yet recover. Unfortunately, however, an attack of capillary bronchitis suddenly set in, and destroyed the patient on the morning of the eighth day. I regret to state that no *post-mortem* examination was made, therefore, much of the value of this case is lost; but the result of this operation was very encouraging: here was a child who had been reduced by a serious attack of scarlet fever, to an extremely weak condition, suddenly brought to death's door by obstructed breathing, and yet life is prolonged for nearly a week by tracheotomy, performed under desperate circumstances. The fatal termination was the result of an accident, it may be said, for the sudden attack of bronchitis was due to the immediate contact of cold air with the lungs, and I have reason to believe that this might have been prevented; the weather for the time of the year was very close, and the nurse and parents were constantly in the room watching the child, the apartment consequently became somewhat foul, and I requested them to open a window for a short time; my impression is that the entrance of the cold air may have caused the mischief to the lungs.

"The result of this case, however, determined me not to hesitate to adopt the operation, if a similar opportunity should offer itself; none such occurred until the 30th of November last, when Mr. Lloyd, of Great Russell Street, called me up at midnight to see a little girl, aged 5, who was suffering from urgent dyspnoea.

"On my arrival, I found the child lying in its nurse's arms, breathing with great difficulty; its countenance was pale and somewhat livid, but there was not that great lividity of face, or blueness of the lips, which is the accompaniment of extreme obstruction to respiration: the difficulty in swallowing had been almost insurmountable, the child scarcely taking anything; on looking into the mouth, the tonsils and the uvula were seen to be enormously swollen and ulcerated.

"It appears that this little girl had been somewhat suddenly seized with feverish symptoms and mischief about the throat and neck five days previously; the symptoms rapidly increased, and, notwithstanding most persevering and judicious treatment, the obstruction to breathing continued, and within the last few hours had much increased in severity; there was not any eruption of scarlet fever on the skin, but it was supposed that the child was suffering from the poison.

"On a careful consideration of all the circumstances of this case, I could not quite make up my mind whether the symptoms were not due as much to want of nutrition, in consequence of the difficulty of swallowing, as to obstructed respiration; and it was determined that Dr. Theophilus Thompson should be called into consultation, and that the question as to operation should be decided by him. This gentleman, after having carefully examined the patient, gave it as his opinion, that she was suffering mainly from obstructed respiration, that the lungs were healthy, and that the operation gave the only chance of life. I accordingly performed it, some trouble was experienced in introducing the tube, and for a short time the patient appeared to be in a critical condition; however, she soon rallied, having lost but little blood, and in a short time the relief that was given was most extraordinary, the chest expanded well, the air was heard entering it, freely and safely; the little girl swallowed nourishment at once, and fell into a sound sleep; after she awoke she sat up, took milk

and water, eagerly holding the mug in her own hands; and I left the house two hours after the operation, with the most hopeful feeling.

"Early in the morning, however, of next day, she had a sudden change, became very restless, jumped out of bed, and then fell into a semi-comatose state. I immediately removed the tube, and found it partially blocked by mucus; it was cleaned and re-introduced, and soon after the appearance of the patient was remarkably altered for the better.

"She continued in this improved state until evening, when she became very depressed, although she took nourishment with avidity, and continued in this state until eleven at night, when she died.

"We were fortunate in obtaining a *post-mortem* examination, when we found that the lungs were in a very healthy condition, as diagnosed by Dr. Thompson, the only exception being a congested state of the posterior part of the lower lobe, on the left side.

"On taking out the whole respiratory canal, we found the base of the tongue and tonsils in a very bad condition, the latter were very large and ulcerated, and the uvula formed a prominent obstruction between them. On laying open the larynx and trachea, the parts about the entrance into the former were so changed by ulceration, that neither the vocal cords nor the ventricles of the larynx could be appreciated.

"The trachea itself was intensely inflamed, and a dense false membrane extended beyond the bifurcation.

"The great point in this case was the healthy state of the lungs, and it was that which warranted the surgeon in performing tracheotomy. From the extreme rapidity of the attack, and from the very great depression of the vital powers, owing to the impossibility of administering more than a very small quantity of nourishment for some days, the child was in an unfavourable state for the operation; the free admission of air, however, gave extraordinary relief, and had the disease been confined to the fauces and upper part of the larynx, recovery would probably have ensued; but, although the lungs were in such a healthy condition, the existence of false membranes in the trachea complicated the case very much, and probably frustrated our efforts to save life.

"We had strongly hoped that there was not any false membrane erected, as in the instance of ordinary croup, seeing that the case in many points presented the same features which obtained in those patients who are attacked during, or subsequent to, the course of scarlet fever; the *post-mortem* evidence proves that, even in those instances when the disease is more fully developed, and is apparently confined to, the fauces and entrance of the air-passages, the trachea itself may be lined with an inflammatory deposit. If, however, it be clearly ascertained that the lungs are sound, that the morbid appearances are fully developed about the fauces, and death from obstructed respiration be imminent, I would not hesitate to resort to tracheotomy, and even if one life out of ten, or one out of twenty be saved, the surgeon will have his reward."

38. *Tapping the Pericardium and Injecting it with Iodine.*—M. ARAN has lately communicated to the Academy of Medicine of Paris, a case of chronic pericarditis, in which he several times tapped the pericardium, and injected it with iodine, with apparent success.

The subject of the case was a man about 24 years of age, of feeble constitution, who in the latter end of 1854 had had pleurisy of the left side. A month after the termination of that attack he was affected with pain in the region of the third or fourth false rib of the left side, slight oppression, and palpitation of the heart when working. These symptoms spontaneously disappeared during the fine weather. Towards the middle of the succeeding July, he was attacked with "*fièvre céphalique*," extreme lassitude, and above all, with pain below the left nipple, palpitations of the heart and dyspnoea.

July 27. Symptoms of pericarditis manifest; febrile excitement intense; lancinating pain in front over the fourth and fifth left intercostal space, increased by pressure; acute sensibility to compression in the epigastrium; precordial dulness considerably augmented, extending over a space measuring

12 centimetres¹ vertically, and 14 transversely; impulse of the heart very obscure—its sounds feeble and distant. Diarrhœa, which had existed eight days, and a suspicious state of the lungs, forbade the idea of general detraction of blood. Six scarified cups were applied to the affected side—the succeeding day, calomel was administered in small doses, and mercurial frictions were applied over the anterior region of the chest with the view of hastening ptialism. Two flying blisters (*pésicatoires volants*) were applied in succession over the precordial region. Notwithstanding these applications, effusion increased, and three days after the pulse was feeble, irregular, unequal, and extremely frequent.

August 7. Augmentation of the general and local symptoms, suffocation imminent. The extent of the precordial dulness is increased two centimetres transversely; complete obscuration of the sounds and impulse of the heart exists; the liver is displaced from above downwards.

The failure of the various means of relief applied up to this time, induced M. Aran to resort to puncturing the pericardium. Rejecting the operating procedures of MM. Riolan and Larrey, he adopted that erroneously attributed to Senac, consisting in penetrating the cavity of the pericardium, between the fourth and fifth intercostal spaces, with a capillary trocar, rather than, by using the common trocar, risk wounding the heart, and producing mortal hemorrhage. The operator also adopted the following precautions: By percussion, the circumference of the pericardium was circumscribed by a series of concentric lines, starting from different points of the chest, and stopping at the heart, and the part where dulness existed designated with care. The attempt was then made to limit the zone, within which the silence of the sounds of the heart was complete, that where they began to appear, and that where they were very clearly heard. These sounds, which were completely absent in the inferior portion of the dull part, reappeared, yet feeble and distant, in the fourth intercostal space, leaving then a zone of sufficient extent within which the trocar could be plunged from before backwards, without running the risk of impinging upon the heart. To be fully assured, a point was chosen for the operation in the fifth intercostal space, two or three centimetres from the extreme limit of the dulness, on the level of which an incision was made through the skin with a lancet, and thrusting the trocar in slowly, says M. Aran, I soon arrived (after having once introduced the stylet without seeing any fluid flow) within the pericardium, the jerking flow of the liquid, at the instant, leaving no doubt in this regard.

Eight hundred and fifty grammes² of reddish-coloured serum were withdrawn by the trocar. The fluid first flowed in jets, then in a stream, the patient aiding its evacuation by prolonged respiratory efforts, so marked was the relief it afforded him. Percussion showed that the line of dulness descended as the fluid flowed, and auscultation allowed the beats of the heart to be perceived more and more clearly, without any friction sound; the pulse itself became more distinct, more regular, and less frequent, descending from 120 per minute to 96.

Sustained by the success of the measure in plenitude, M. A. practised with precaution in this case the injection of iodine, streaming into the pericardium a mixture of 50 grammes of tincture of iodine, with 50 grammes of distilled water, and 1 gramme of iodide of potash. The introduction of this was not even felt by the patient. After retaining it several minutes in the cavity, several grammes of the fluid were permitted to flow out—the wound was then closed by graduated compresses and bandage.

On the 19th of August, twelve days after the first operation, a second was required, which gave issue to 1,350 grammes (more than 42 fluidounces) of a very albuminous, greenish fluid, resembling bile in colour. The injection was now repeated, containing 4 grammes of iodide of potash, almost the entire of it being left in the pericardium. The efforts made by the patient to aid the evacuation of the morbid fluid, determined the admission of a quantity of air

¹ Centimetre—4.72 English lines.

² The French is equal to 15.434 grains Troy.

into the scrofulous cavity, as manifested by *bruit de gargouillement*, or *de clapotement*, described by M. Bicheteau, and by tympanic sonority in the precordial region. These phenomena disappeared in a few hours, but the effusion began to reaccumulate on the evening of the day of operation. Up to the 21st of August, the dulness increased. On the 22d, it remained stationary; and by the end of the 23d, it commenced diminishing. Soon the bruits began to be perceived, although feeble, at the apex of the heart; and by the 28th of August, the dulness did not extend beyond the median line in front, the nipple on the outer side, and the third rib superiorly.

In proportion as the affection appeared to subside on the side of the heart, signs of tuberculosis of the lung became more and more evident, chiefly in the left side, where the signs of inflammation had been first noticed.

Towards the end of September, œdema of the lower extremities was noticed, which did not become general. Since the end of October, there has been return of strength and appetite, and amendment of the thoracic symptoms and of the general health. M. Aran expressed the hope that this case, which established the safety of injecting solutions of iodine into the pericardium, would encourage physicians to practise an operation which was called in to save the life of the patient, who without must inevitably have perished.

The editor of the *Gazette Médicale*, in a recent number (Dec. 1), severely criticises this case. He asks whether the author of the paper (who belongs, he says, to a school which piques itself on great strictness in the observation of facts) has been sufficiently strict in the interpretation of facts in this case? The pericardium was twice tapped and twice filled again, in spite of iodine injections; then blisters were used, which possess an old reputation for promoting the absorption of similar effusions, and no hesitation is felt in ascribing to the iodine injections the benefit which most certainly was derived from the blisters!

This "little irregularity of reasoning," it is added, will not help to recommend the practice adopted.

39. *Gunshot Wound through the Shoulder-joint; Excision of the Head of the Humerus; Recovery, with hinge-like movement of the Articulation.*—Great praise is due to modern surgeons for the efforts made by them to avoid amputations of limbs, and to replace this formidable measure by resections and excisions. This approbation was originally founded upon the belief that the milder course of procedure was extremely likely (judging from a few examples, and from the laws of repair in the human organism) to be attended with favourable results; and we have now good reason to hold our opinion more and more strongly, as the numerous successful cases which it has been our privilege to report, are a sufficient guarantee of the soundness of the practice to which we have alluded. It cannot, however, be concealed that failures have been recorded, but these should not make us fainthearted, for the ratio of successful cases is considerably in favour of resection. From the numerous operations of this kind which we have seen, we are inclined to think, that amongst the principal causes of ill-success are, the state of debility and exhaustion to which patients are often reduced after long-continued diseases of joints, and the scrofulous diathesis with which most of the sufferers are affected. Hence we are led to view the case which we shall this day bring before our readers as extremely valuable, because the operation was performed upon a man of average health, and not suffering from a strumous taint. As injuries of the shoulder by rifle-balls are certainly not rare in the present contest, we gladly put Dr. BERN'S case upon record; for it may reasonably be expected that other surgeons, either in the army or navy, will, under similar circumstances, adopt the same plan of practice.

Thomas K.—, belonging to Her Majesty's ship *Conflict*, a man about forty years of age, when engaged in the boats with the enemy in the Gulf of Riga, on the 1st of October, was wounded in the left shoulder by a rifle-ball. The projectile traversed the deltoid about an inch below the acromion, passed upwards and backwards under the outer end of the clavicle, making a wound of exit through the skin and integuments of the back near the posterior superior angle of the scapula. The patient reached the ship about an hour after being—

hit; clots had formed in both wounds, while there was a slight venous hemorrhage, mixed with synovia, flowing from the aperture in front. This soon ceased on application of a compress. There was no pain on motion in the shoulder, so that the joint seemed to have escaped; but the man complained of constant and fixed uneasiness in the inner and back part of the arm, with pain on pressure over the outer end of the clavicle. The ball, which was picked up in the boat, was indented with adhering epicolm of bone, and the wound was treated with simple applications till the patient was sent for further treatment on board the hospital ship *Belleisle*.

On admission, Dr. Beith found the wound caused by the entrance of the ball still a well-defined circular opening, about half an inch in diameter, situated as just described. A probe could be directed backwards, inwards, and upwards for about two inches, apparently into the head of the humerus, amongst fragments of broken bone. The wound of exit, which was of an oblong shape, lay over the supra-spinous fossa of the scapula near its posterior superior angle, and was sufficiently large to admit the point of the index finger. There was considerable swelling of the soft parts around the joint. The patient had no power over the injured humerus; his pulse was quick and feeble. He was ordered wine and middle diet, and to be kept as quiet as possible.

Third day after admission.—Sleeps very well at night; no pain now in the shoulder except on movement of the joint; the swelling is not abated, and there is considerable discharge; no loose bone detected, though the probe passes freely through the head of the humerus under the acromion and along the supra-spinous fossa into the supra-spinatus muscle. It is still doubtful whether the glenoid cavity or any portion of the scapula be injured. Pulse 100, soft and full; skin warm and moist; appetite middling. Ordered quinine, and to go on with the wine.

Seventh day.—The swelling has been lessening during the last three or four days, and the wounds are looking healthy; the aperture of exit not inclined to heal, like the wound of entrance; constitutional disturbance trifling. To continue the quinine and wine.

Eleventh day.—Shoulder little if at all swollen; discharge from the wound offensive and ill-conditioned, with occasional flow of what seems synovial fluid.

Thirteenth day.—Considerable irritative fever, especially towards evening.

Fifteenth day.—The patient complains to-day of gnawing pain in the shoulder; the discharge is still profuse, and becomes more offensive; matter seems collecting at the anterior margin of the axilla; profuse discharge through the wounds; pulse 100, still of good strength; appetite good; night-sweats; expression of countenance anxious; matter has formed over the outer and posterior aspect of the joint, and fluctuation is distinct about the centre of the deltoid.

A consultation was held on board, at which it was agreed that excision of the head of the humerus should be performed, as offering the best chance of saving the limb and rescuing the man's life.

It has been very justly remarked by a recent and graphic writer on the surgery of the last war, that "if the surgeon does not cut off the arm or head of the bone, long continued suppuration will cut off the patient." As little of the shaft of the humerus as possible should, however, be removed, in order not to injure the circumflex arteries; and a very cordial point to be observed is, to take away all portions of the cancellated structure that seem involved in the injury, while the tendons of the long and short head of the biceps should be spared if possible. Velspeu gives 13 deaths from this operation, while a German writer (Paul), who has published the latest statistics, records, in 84 resections of the humerus, 23 deaths; and, in 470 cases of amputation of the arm, the large proportion of 157 deaths.

Nov. 1. (Eighteen days after admission.)—The patient was placed under the influence of chloroform to-day, for the second time, as some difficulty was experienced on one of the two preceding days in bringing him into a state of anæsthesia. A short crescentic flap was then cut in the deltoid, commencing over the coracoid process and ending a little behind and below the acromion,

this direction differing somewhat, perhaps, from the more ordinary angular section or flap. By this mode of operation, and by a little further manipulation, the head of the bone was readily disarticulated, and then removed by the common saw, as in the mode described in a former *Mirror* (vol. ii. 1855, p. 169). The ball was found to have entered the head of the humerus, at the bicipital groove; it had fractured the upper part of the articular surface of the bone, in its course through the joint, splitting the head of the bone as far down as its surgical neck.

The articular cartilage of the glenoid cavity was found to be destroyed by ulcerative absorption, but the bone had otherwise escaped uninjured; the scromion and clavicle were also entire, and a small portion was all that remained of the articular cartilage of the head of the humerus. Very little blood was lost during the operation, and only one small vessel required ligation. The edges of the wound were brought into apposition by sutures and adhesive plaster, cold water dressings were applied, and the man removed to bed. He was ordered a full dose of Bentley's solution, and to be kept as quiet as possible. Middle diet, with wine.

The patient progressed very favourably, and union by the first intention was visible in part of the wound three days after the operation. On the ninth day, a slough separated from the cavity of the wound; and on the tenth, an erysipelatous blush was noticed round the shoulder, extending towards the sound scapula, and the cervical region. Twenty drops of tincture of the sesquichloride of iron were given every second hour. On the twelfth day the blush had disappeared; and on the fourteenth the patient was transferred to the Naval Hospital Ship at Plymouth.

Up to January 1, 1856 (two months after the operation), the patient went on improving; the wound, at that date, was all but healed, and the man likely to have a useful hand and arm. There was no inconsiderable amount of hinge-like movement in the shoulder, which movement promises to become still more extensive when the man is able to move about more freely.

Feb. 14. Dr. Dunn, under whose kind and skilful treatment the patient has been since his discharge to Plymouth Hospital, writes us that "the case is progressing most favourably, and bids fair to end in a very useful arm." He also states that, since last report, "an abscess formed under the line of incision, through which two small semicircular portions of the exfoliated edges of the humerus have escaped. This abscess is healing rapidly, and the motion and contour of the arm are improving daily."

The main question suggested by this case is, whether the patient was likely to recover with partial or complete ankylosis of the joint without any operative interference. Perhaps he might; but as there were before him two contingencies of the most fearful kind; amputation at the shoulder-joint, or death by irritation or exhaustion, it was plainly the surgeon's duty to use such means as would hold out a good chance of saving both life and arm. It will be perceived that some difficulty was experienced in bringing the patient under the influence of chloroform. This circumstance has been observed by other military and naval surgeons; and soldiers, more especially, are found very unsusceptible of the effects of the anæsthetic agent after the excitement of the field of battle.

We stated, in our introductory remarks, that the present case derived its interest from the previous good condition of the patient; and we may now add, that Stromeyer and Esmarch (the latest authorities on resection after battle) mention, out of forty cases of resection in the upper extremity, thirty-two in whom useful limbs were preserved.—*Lancet*, Feb. 23, 1856.

40. *Gunshot Wounds of the Skull*.—A very interesting and practical statement has been recently made by STROMAYER, as to his experiences of gunshot wounds of the skull. He says that during three years he attended hospitals in Vienna, London, and Paris, during the times of Astley Cooper, he did not meet a single case in which the operation of trephining the skull had been successfully resorted to; while many severe wounds of the skull came under his observation which recovered without any operation. This weighed on his

mind, till the chances of war placed recently a set of eight cases of gunshot fractures of the skull, with marked depression of bone, under his care, and all with brain symptoms—the whole eight recovered by being let alone; and notwithstanding the time-honoured legends of Cooper, Denoe, and Brodie, he is now satisfied this is the best practice! The plan he lays most value on is neither expectant nor operative, but, singularly enough, antiphlogistic, more particularly bleeding, if necessary, to anticipate inflammation of the membranes. Sir George Billingall gives sixteen cases of wounds of skull which recovered quite unexpectedly after Talavera, by what he called “cold applications;” but Stromeyer says they recovered because Sir George was then flying before the enemy, and had not time to use his trephine. Stromeyer thinks, from what he has seen, that the chief danger consists in allowing atmospheric air to act on the brain substance, as it at once sets up a sort of decomposition or sloughing process, much more formidable than the “signs of compression” dwelt on by Astley Cooper, and that by using the trephine, we go, as it were, into the very jaws of death.—*Dublin Med. Press*, Jan. 30, 1856.

41. *Ununited Fracture of the Humerus cured by Resection.*—By JAMES SPENCE, Esq., surgeon to the Royal Infirmary. On the 11th November, 1852, A. Johnston, æt. 22, had his arm caught in a threshing-mill, by which the humerus was broken at two points; there was one fracture two inches below the surgical neck of the bone, and another at the junction of the middle and inferior thirds of the bone. He was seen by Mr. Falconer, of Loanhead, who adjusted the fractures, and put up the limb in pasteboard splints. I saw him in the beginning of February, 1853, at the request of Mr. Falconer, as the lower fracture had not united. On examining the arm, I found the upper fracture firmly united; the lower one, however, was quite movable, but there was no overlapping of the ends of the bone, nor any deformity when the limb hung by the side.

As the injury was comparatively recent, I advised a further trial of the splints, with pads, so as to keep the parts in accurate contact, the use of nutritious diet, and exercise in the open air. This plan was persisted in till the end of March, 1853, when I again examined the arm. There was no attempt at union, and the ends of the bone were felt as if atrophied. I tried to excite action by introducing, by subcutaneous puncture, a strong sharp needle, or rather narrow knife, down to and between the ends of the bone, so as to break up the fibrous structure between them, and to scrape their surfaces. The splints were then carefully reapplied, and the arm firmly supported. At the end of six weeks, I found that no change had been produced.

In September, 1853, I passed a seton between the ends of the bones, and retained it for some days, till suppuration occurred; but even this gave rise to very little local excitement, scarcely any inflammatory swelling supervening. What little there was passed off very quickly on the seton's being withdrawn, and no benefit resulted from its use.

I had previously proposed resection of the ends of the bone, but at the same time thought it right to explain that it was attended with more risk than the methods hitherto adopted, and the young man's friends were at first opposed to its performance. After some months had passed, however, the patient was so anxious to give it a trial that his friends consented, and I performed the operation in April, 1854.

I made a longitudinal incision on the outer side of the arm, about three inches in length, it centre corresponding to the seat of fracture. The arm was then bent at the false joint, so as to render prominent the ends of the bone, and the incision was carried down to them. I had determined to separate the bone as little as possible from the surrounding parts, and therefore merely cleared the lower end of the upper portion sufficiently to enable me to saw through about half its thickness, and completed the section with a pair of strong bone-pliers. I then did the same to the end of the lower fragment, and snipped off some irregular portions. There was very little bleeding, and no vessel required ligature. The incision was closed with four points of suture, dry lint applied, and the arm placed in a rectangular splint, so adjusted as to allow the wound

to be dressed without moving the limb. No constitutional disturbance followed the operation; the pulse never rose above 80, he suffered almost no pain, and the wound united entirely by the first intention. Indeed, so little swelling or irritation appeared at first, that I was afraid this operation also would fail; but at the end of ten days there was firm limited swelling at the seat of fracture, and the patient stated that he felt the sensation of constant pricking pains in the part. At the end of six weeks from the operation, there was hard swelling, involving the ends of the fractured bone, and it seemed firmly consolidated. I therefore sent him home to the country, but directed him to keep on the splints for some time.

I saw him several times, and I allowed him gradually to use the arm; but, in November, 1854, I found that, from using too much liberty with the arm, it had bent considerably at the united part, showing that it had not quite consolidated. I, therefore, fractured it fairly across, and readjusted it. This was attended with more pain and swelling than had yet occurred after any operation; but in two months afterwards, when I removed the splints, I found firm osseous union, and he can now use the arm with perfect freedom.

In reviewing the case just related, there are two points which, I think, deserve attention: First, the causes which originally prevented osseous union; and, secondly, the plans of treatment adopted.

The causes generally mentioned as leading to want of union in fractures, are either some state of the constitution debilitating the reparative powers, or some error in the treatment, such as mal-adjustment of the broken bones, too early movement of, or too much interference with the injured limb. Occasionally, also, the interposition of some portion of muscular tissue between the ends of the fracture prevents firm union.

In this case, there was nothing in the treatment which could have led to want of union; the parts had been well adjusted, and accurately retained in position, and there was neither shortening, overlapping of the ends of the bone, nor any other deformity, when I first saw him.

As regards constitutional causes, he stated his health to be good; but he was rather pale, and suffered occasionally from dyspepsia, apparently depending on an inveterate habit of smoking; whilst the small amount of local or general excitement caused by any of the operations performed on the arm, would argue a want of energy in the vital powers unfavourable to repair. Still, there was nothing so marked in the state of his general health as sufficiently to account for failure of union, and I think it is to the nature of the local injury, in this case, that we must look for the explanation.

It will be observed that the humerus was broken across at two points, and that the fracture was the result of direct violence, of a kind likely to inflict great injury on the surrounding soft parts. The upper fracture united readily and completely; but the very consolidation at that part would diminish the free circulation through the medullary Haversian structure, and, consequently, impair the vitality of the portion of the shaft between the two fractured points, whilst the bruising of the soft textures would be likely to impede the periosteal supply of nutrition, and thus the lower fracture would be placed in most unfavourable circumstances for union.

Secondly, as regards the treatment, the simpler measures at first adopted proved quite inefficient, apparently producing scarcely any local excitement whatever. In deciding on resection of the ends of the fractured bone, I determined to remove no more than the rounded and atrophied ends, and to do so with as little disturbance of the parts immediately surrounding the bone as possible. Having observed, in some cases which had come under my notice, where resection had failed, that fully two inches, or even more, had been removed, it always seemed to me, that not only the amount of bone thus removed, but also the great denudation required to effect its removal, was sufficient to account for the failure, besides increasing the risk of severe constitutional disturbance. Hence, I adopted the plan described, by which I was enabled, by using the bone-pliers, to complete the section without insulating the humerus, except the mere portion to be removed; whilst the bone so divided would more closely approach to the condition of fracture than if fairly divided by the saw.

The result fully answered my expectations, for there was scarcely a trace of constitutional irritation, whilst the incision healed by the first intention. At the same time, we must bear in mind that the patient seemed peculiarly unexcitable, as shown by the results of the former operations with the needles and seton. The osseous union was felt to be firm; but he had used the arm too soon and too freely, probably before complete ossification had taken place throughout its thickness, and so the bending had occurred. This, however, was scarcely to be regretted, for it led me to fracture it again to obviate deformity, after which the deposit of new bone was much greater than at first after the resection.—*Edinburgh Med. Journ.*, Nov. 1855.

42. *New Method of Treating Fractures.*—MR. WINCHESTER read a paper on this subject to the Harveian Society, February 7th, 1856.

The object of this paper was to establish a fixed principle for the guidance of the surgeon in the treatment of fractures, the want of which, the author considers, has been the cause of all the uncertainty, anxiety, and failure hitherto existing. Surgeons should not be content with partial, but should aim at complete success, or the perfect restoration of the limb to its normal state. So varied are the limbs of different individuals, that unless the splints themselves have the power of being adjusted to the peculiarities of each case, it is impossible to preserve the natural form. The two halves of the body being symmetrical, the one can be used as a guide to the other. The inspection of the sound limb is of great value as a means of diagnosis, and if so, how much more valuable, in a practical point of view, to be enabled to model a sound or healthy limb, and to use such model as a support to the injured or diseased one. The length by admeasurement alone is no positive criterion, neither is the knowledge of form conveyed by the eye simply of much use, unless we can so regulate the apparatus as to preserve such form. The length, to be correct, must depend upon the curve of the limb; for as a curved line between two fixed points is longer than a straight one between the same two points, so the making a curved limb straight must either lengthen such limb (cases of this sort have occurred), or else admit of a certain amount of displacement, whereby the same length may exist between the same two points. It is as easy to preserve the natural form of a limb, whether the fracture be simple, compound, or comminuted, as it is to allow it to assume, or by improper instruments to give it (and this is the direct tendency of all the ordinary forms of apparatus), an unnatural one. Immediate reduction should be practised, as a saving of time and suffering to the patient. Screws for the purpose of extension should be discontinued, not only as unscientific and barbarous, but as unnecessary and injurious. Extension and counter-extension must co-exist, and therefore permanent extension must be injurious from the pressure on the points of resistance, and any stretching beyond what is natural fatigues the muscles, irritates the patient, and impedes union. Retention, then, is the point of the greatest importance. The apparatus, having the natural form given to it, as above alluded to, affords perfect support throughout the entire shaft of the bone, supplying that resistance externally of which the muscles have been deprived internally, preventing their contraction, and consequently avoiding displacement. The adoption of the above principle affords a degree of confidence, precision, and certainty, unattainable by any other means. By the exact position which it insures and preserves, the physiological relations and functions of the part are restored, absorption and deposition go on more readily, the patient's suffering is greatly diminished, and nature, having only to repair, does her work speedily and perfectly. One point of great importance in fractures of the leg, but which has hitherto been entirely neglected, is that of allowing the apparatus to move freely with the limb, whatever its motions. Splints are fixed either by a crossbar at the bottom, or by screwing or tying it to the bedstead. The result of this is that the lower or separated portion of the limb becomes one with the splint, and therefore immovable, rendering the seat of fracture the axis of motion, which in all cases retards, and in some even prevents union altogether. In fractures of the thigh, however, in the upper portion of it, where there is not room above to secure it to the splint, so as to allow

of motion from the hip-joint, it becomes necessary to fix that joint by securing the splint to the pelvis, in order to prevent the natural tendency to eversion, and a crossbar at the bottom would facilitate it, or prevent lateral motion; at the same time, freedom of longitudinal motion should be permitted, or else, in oblique fractures, overlapping would be the inevitable consequence. The starched apparatus was objected to as an early application, inasmuch as, according to the present method of applying it, exact position cannot be preserved, and its retentive power is equal for a bad as a good position. The plan recommended, in order to obtain the best results from its uses, was to apply it with many-tailed bandages. By this means, the limb remaining at rest during its application, the causes of displacement are avoided, and the process simplified (lateral, of moistened pasteboard or folded linen, being of course used), an ordinary assistant being alone necessary, and the temporary artificial support having the natural form given to it, as above described, such form would be preserved during the drying of the starch. The best time for its application is from the fourteenth to the twenty-first day, when, all swelling having subsided, exact position can be ascertained. The author exhibited the various forms of lateral and posterior apparatus he has invented to carry out the above principle, some of which have already been described in the *Lancet*. He stated, also, that in practice the instruments had realized his most sanguine expectations. All the cases in which they have been used terminated successfully, and in an unusually short space of time, fully proving the correctness of the principle, that the nearer the parts are placed in their natural position, the less the time required for restoration. All the patients expressed themselves grateful for the ease and comfort afforded them by their use.—*Lancet*, March 1, 1856.

43. *Luxation of the Femur upwards on the Dorsum of the Ilium reduced by Reid's method.*—This case was communicated to the Surgical Society of Ireland by Mr. M. H. STAPLETON. A boy, aged six years, was admitted into Jervis Street Hospital on the 29th of August, 1855, at 1 P. M., having sustained an injury of the hip-joint on the previous evening. All that could be learned as to the manner in which the accident occurred was, that the boy, whilst climbing a large wooden gate, suddenly fell backwards to the ground, the gate (which was unattached by hinges or otherwise) at the same time giving way and falling over him. His mother states that she found him in this situation; and having extricated him from his dangerous position, she had him at once conveyed to a neighbouring practitioner. At this time he complained of severe pain immediately above the patella. No attention, however, was directed to the principal seat of injury, though the usual symptoms of this dislocation were well marked, the mother being merely desired to stupe the knee, to relieve the pain complained of in this situation.

On examination, the following day, when brought to the hospital, the following were the appearances presented: The injured limb was shortened by the entire length of the patella, the thigh was slightly flexed, and the knee inclined inwards, the hall of the great toe resting on the tarsus of the opposite side. The trochanter major was approximated to the anterior superior iliac process of the ilium, and was also less prominent than that of the sound limb. The natural roundness of the hip had disappeared. Any attempt to rotate the foot outwards was attended with the most acute pain. There was a slight mark of abrasion on the skin below the knee. When the boy was left undisturbed, the only pain complained of was that referred to a point above the knee.

From the presence of these symptoms, Mr. William H. Hozier, the resident pupil, was enabled to pronounce the case to be one of dislocation upwards on the dorsum of the ilium.

The surgeons of the hospital were summoned without delay, and the child having been placed under the influence of chloroform, Mr. Stapleton having obtained Mr. Ellis's permission (whose case it was) to try Mr. Reid's plan before the usual method of reducing such dislocations, proceeded as follows: The leg was bent upon the thigh, and the thigh flexed upon the pelvis, until the knee nearly touched the abdomen, when the knee was abducted and ro-

tated outwards, when reduction was immediately accomplished and a snap distinctly heard by those near the spot. My attention was first drawn to this procedure by reading a case recorded in the *Medical Times and Gazette*, June 18, 1855, in which it proved successful under Mr. Cock, of Guy's Hospital, but in which no mention is made of the original inventors or proposers of this procedure. In the number for the 18th of July, the *Medical Press* enlightens us on that subject in an abstract taken from some American journal, and there we find Dr. W. Reid, of Rochester, New York, published a paper on Feb. 3d, 1852, in the *Transactions of the Medical Society of the State of New York*, which society had held its annual meeting at Albany. But as regards priority of invention, we have Dr. Fischer, of Cologne, who published in *Casper's Wochenschrift* in the number for November, 1849. His method of reducing dislocations of the hip consists in flexing the femur on the trunk, and making rotation of the limb conjointly with abduction or adduction, as the head of the bone may be situated one or the other side of the acetabulum; and we also find in one of the New York journals for 1855, a Dr. Meyer spoken of as having made use of this procedure of Dr. Fischer without being aware of Dr. F.'s published statement.

It may be advanced by some that this method can only be employed when the patient is under the influence of chloroform; but this is not the case, as is proved by a case given in the *American Journal* for October, 1855, in which reduction was accomplished by this method without the use of chloroform. Wattman, Kleuge, Rust, and Colombat have proposed methods of replacement, in which, by diminution of the muscular contraction, a less outlay of power is required than in those in more general use.

To those curious on the subject for the particulars of the procedures of Wattman, Kleuge, Rust, and Colombat, will find them in Chelius's work on Surgery.

It was well known that when patients were taken by surprise, dislocations were often reduced with the greatest ease. Some years ago a girl was brought into Jervis Street Hospital, having fallen into the hold of a vessel and dislocated her hip-joint. At the time of the accident, as well as at the time of her admission, she was in a state of complete intoxication. She was to be placed under the care of the late Mr. Kirby, and he with others being anxious to examine the limb, took her out of bed, and supported her in the erect position. Hearing that Mr. Kirby was coming upstairs, and supposing he would not like his case to be meddled with, they were anxious to get her into bed, and to their great surprise while raising her up for that purpose the bone slipped back into its place, as he (Dr. S.) supposed at the time it was owing to muscular relaxation from intoxication; but on reflecting on the case when made aware of Reid's method, he came to the conclusion, that the reduction was due to the fact of the thigh being flexed on the chest during the movement into the bed, and that the removal of the hand from under the knee rotated it outwards.

The President said it was a good many years since he brought under the notice of that Society a case of dislocation of the hip-joint, reduced by Colombat's method, and he confessed that, in principle, he could see no difference between that method and the one since proposed by Reid. There was indeed a slight difference in manipulation, but as regarded principle, the two methods were exactly the same. Colombat's method had been but seldom practised, as far as he knew; but speaking from his own experience of the facility with which dislocations of the femur could be reduced by Colombat's method, and referring also to a case which he saw in the practice of Dr. Hingrave, he could hardly conceive a more simple or compendious method could be desired by any person. The only difference he could see between the two methods was this—viz: in the American method, the patient was placed on the back, while in the French method the position was altered.

Dr. Power stated that in Mr. Stapleton's case, all the muscles were perfectly flaccid, and he was astonished at the entire absence of anything like resistance on the part of the patient. In all his experience, he never saw a dislocation into such an anomalous position, as regarded the limb, reduced so readily and in so short a space of time. In fact, while they were looking at the case, and

hardly expecting any immediate result, the limb was suddenly restored to its natural place; nor did it even require the evidence of his eyesight to convince him of that fact, for his ears told him plainly that the dislocation had been reduced.—*Dublin Medical Press*, Feb. 13, 1856.

44. *Dressing of Stumps under Water*.—M. LANGENBECK, of Berlin, has, for some time past, been in the habit of placing stumps in zinc boxes filled with warm water; and it is stated that some of the unpleasant sequelæ of extensive wounds are, by this kind of dressing under water, completely avoided. M. Valette, surgeon to the Charité Hospital of Lyons, considers that this method owes its success to the fact that the wound is protected from the action of atmospheric air, the analogy being drawn from the phenomena attending subcutaneous solutions of continuity. M. Valette leaves the stump a fortnight or twenty days under cold water—an infusion of aromatic plants in which some alum is dissolved. Pus is, in this manner, coagulated and thrown down. He thinks that the present method is calculated to prevent purulent absorption; symptomatic fever is much slighter than by the ordinary method of dressing, and pain is considerably less. M. Langenbeck is on the point of using caoutchouc bags instead of zinc boxes; the bags are connected with two tubes, one bringing the water from a pail placed on a shaft, the other acting as a waste-pipe. A continuous current may be established at will, and keeps the part perfectly free from any accumulated secretions. This latter method is certainly worth trying.—*Lancet*, March 1, 1856.

45. *Aneurism of the Left Internal Carotid Artery within the Cranium, diagnosed during life, and successfully treated by Ligature of the Left Common Carotid Artery*.—Mr. R. W. Cox, Surgeon to the Bristol General Hospital, relates the following remarkable example of this:—

"In the middle of November 1851, I was requested by my friend Dr. Swayne to see a woman (Hannah Wray) with him, whom he supposed to be suffering from aneurism of one of the arteries of the head. She gave me the following history:—

She was 55 years old, married, and had been in good health up to five months previous to the time of my seeing her, when she had had a very angry altercation with her husband; blows passed between them, she receiving some on her head; during the quarrel she worked herself into a most violent passion, and at the same time greatly exerted herself by lifting some very heavy weights. Within five minutes after these occurrences—in fact, as soon as she recovered a little from the excitement—she complained to a neighbour of an extraordinary sensation (a buzzing and beating noise) in the head, such as she had never before experienced, and which noise, she now tells me, has continued without a moment's cessation from that time to this (from June to November 1851).

She likens the buzzing, as she calls it, in her head to the puffing of a steam engine—'whish, whish, whish'—and says that she hears it more distinctly with the left than the right ear, and that it is accompanied by a continuous sound like low thunder, emanating apparently from, and heard most distinctly at a spot situated near the posterior superior angle of the right parietal bone.

Since these symptoms came on, she has been unable to lie down in bed, and has been obliged to sleep in the sitting posture; and though always in the habit of dreaming, yet the dreams now are become of the most frightful character, disturbing her rest, and causing her to wake in an agony of terror.

On examination, no abnormal sound could be heard in the heart or great vessels; but on reaching the region of the neck, a very loud aneurismal bruit, synchronous with the pulse, was at once perceptible; it could be traced to the head, and heard distinctly over its whole surface, but most loudly over the left petrous bone; pressure on the right common carotid had not any influence over the sound, but when exercised on the left, caused it to cease immediately; though, after a time, she herself can hear a faint murmur, even whilst the pressure is continued, and that to the perfect prevention of the passage of blood through the artery. On listening very attentively with the stethoscope over

the right carotid, the beat of that vessel could be distinctly separated from the bruit, which was also less loud on this than on the left side. There was a very trifling difference between the appearance of the two eyes, which I found to depend on a very slight squint towards of the left eye, and a habit she had of winking with it. This peculiarity in the eyes came on subsequent to the buzzing in the head. She said she did not see so well with the left as the right eye; but the difference, if any, was very slight: she, however, always used the right eye for ordinary vision. On making her look at an object with both eyes, she saw two images, one by the side of the other; but they were not equally distinct: on closing the left eye, the less distinct image vanished. She herself was not aware of the slight strabismus, merely imagining that the left eye was rather the weaker of the two, and believing that she either winked or placed her hand before it simply for the purpose of guarding and saving it. She could, when she willed, abduct the left eye nearly as well as the right.

Her hearing was not affected; but the noise in the head was so great as to overcome even the sound of the rolling of the carriages in the street, unless attention was strongly directed to them. No tumour could be detected after a careful examination both of the external parts of the head and neck, as also of the nasal, buccal, and pharyngeal cavities.

My diagnosis was aneurism of the left internal carotid, as it enters the cavernous sinus, immediately after its emergence from the petrous portion of the temporal bone. I remarked, that I should consider the diagnosis perfectly verified in case of recovery, if the following phenomena should occur after ligation of the left common carotid: first, of course, if the bruit ceased; then, and more especially, if the strabismus in the left eye should quickly almost suddenly increase, until it showed that the paralysis of the external rectus muscle was nearly entire; and if, eventually, it were followed by slow but gradual recovery of the power of the muscle, as the patient regained her usual health; in other words, if the strabismus should eventually be recovered from.

Dec. 11, 1851, 11 A. M. The patient being under the influence of chloroform, I tied the left common carotid artery; Mr. Morgan, Dr. Swayne, and Mr. Henry Swynne, being present. The only peculiarity in the operation was, that, in consequence of the enormous distension of the anterior and external jugular veins, and of the branches coalescing them, I was obliged to make but a small incision, and that not exactly in the ordinary position. On ligaturing the vessel, the rush at once ceased; but in a very short period it was succeeded by a very soft, almost continuous murmur, perceptible by applying the æthoscope immediately over the left ear. After the operation, she was able to retain the horizontal posture. At 4 P. M. of the same day, could hear no murmur myself; tho patient says she hears a crackling in her head, and a noise like a bell.

13th. Hears no noise in head, even when she listens attentively; nor can any be heard on applying the æthoscope to the temples. *She cannot turn the left eye out as much as before.* 10 P. M. She drew my attention to the fulness of the anterior temporal arteries of the right side.

15th. Removed stitches from the wound, which is soundly healed, except where the ligature comes out. She dreamed a good deal last night—horrid dreams. Can now hear carriages in the street distinctly, even when they are far off.

18th. Slept well last night; no bad dreams, though she did dream, which she has always been accustomed to do.

19th. Dreams of a funny character, instead of frightful.

22d. Dreams still more ludicrous in their character.

29th. *No improvement in squint.*

30th. Does not dream so much.

Jan. 6, 1852. *Left eye seems to be moved more outward.*

13th. Ligatures came away in the evening. It will be perceived that the ligature was a long time coming away—thirty-three days. Since Jan. 5, slight traction was used on it by means of an India rubber band. I was indebted for this idea to some remarks made by Mr. Clarke at one of our meetings.

Feb. 2. Continues improving, but complains of indistinctness of vision when

using both eyes. Has regained the power of abducting the left eye to nearly its full extent.

16th. Indistinctness of vision still remains when using both eyes. *Abduction of left eye nearly perfect.* Patient may be considered well.

REMARKS.—This case is, I imagine, unique as regards diagnosis; it is, as far as I can ascertain, the only instance in which aneurism of the internal carotid artery within the cranium has been diagnosed during the life of the patient. In giving the history of the case, I purposely avoided offering any explanation of the symptoms. I will now, therefore, in conclusion, mention the grounds which led me to form my opinion in the first instance; these, taken in connection with the phenomena which ensued after ligature of the left common carotid, will go far to render the correctness of that opinion a matter of certainty.

The suddenness of the accession of the symptoms, coming on as they did under the influence of such exciting causes, together with the character of the bruit, as heard both by the patient and myself, pointed at once and clearly to lesion of a bloodvessel. The absence of the bruit in the heart and great vessels, its being heard at the lower part of the neck, and with gradually increasing intensity towards the head, showed that it originated either in one of the common carotid arteries, or in one of their branches, or else in one or other of the vertebrae. The effect of pressure on the carotids demonstrated that it was the left common carotid or one of its branches that was affected. On carefully tracing the sound, its point of greatest intensity was the petrous portion of the left temporal bone.

In addition to the bruit heard by the patient, you will remember that she also heard, somewhere about the situation of the posterior superior angle of the right parietal bone, a *continuous* murmuring sound, which she compared to low thunder. Now, any sonorous vibrations, produced immediately in contact with the petrous bone, would be conveyed through the walls of the skull—principally by means of the thickened bony ribs, as they may be called, of the cranium, which arise from various parts of the cranial base, and pass up the sides and over the vault of the skull—and would meet at some point at or near the posterior superior angle of the opposite parietal bone; and the vibrations, though intermittent at their origin, would, from the fact of their being conveyed through channels of different length and various conducting power, be no longer heard at the spot mentioned as possessing the same intermittent character as that with which they originated, but would become mingled together, some traversing rapidly, so as to join with the vibrations of the beat before, others slowly, so as to unite with those of the beat after: the interval between the beats would thus be filled up, and the sound heard would necessarily no longer be an intermittent, but a *continuous* one. The situation of the disease was then not only in the neighbourhood of the petrous bone, but touching it: no tumour could, however, be detected either externally or in either of the nasal, buccal, or pharyngeal cavities. The mischief must, then, be located in the carotid canal of the petrous bone, or immediately in the inner side of it.

The patient had yet one other symptom, but not very easily detected, which came on subsequent to the buzzing in the head, and which, when ascertained and properly appreciated, decided the matter. She had slight, very slight paralysis of the external rectus muscle of the left eye; which muscle is supplied by the sixth cranial nerve, which is devoted solely to it. Now, of all the nerves which go to the muscles of the eyeball, the sixth is the only one that passes through the cavernous sinus, the remainder being lodged in the external wall; and it passes through the sinus in direct contact with the external aspect of the internal carotid artery immediately on its emergence from the carotid canal. A small tumour of the vessel in this situation would account for all the symptoms, not only for those having direct reference to the bruit and strabismus, but also for the inability to lie down; the system being as it were conscious of some imminent danger threatening it, and feeling that it was less likely to suffer injury, the weight of the column of blood being restrained from pressing on the aneurism. (The sitting up may be fairly likened to an ordi-

nary automatic consensual action.) It would also explain in some degree the horrid character of the dreams, which were in all probability produced partly by this constant indefinite sense of danger to which I have alluded, and partly by disturbance of the cerebral circulation.

The double vision, when looking with both eyes, was simply owing to the disturbance of the usual axis of vision, produced by the recent and increasing internal strabismus; and the trifling indistinctness of vision was due perhaps to less blood passing through the left ophthalmic artery, thus diminishing the supply to the retina. I am rather inclined to believe that throughout she confounded the effects produced by the continual alteration of the nasal axis of vision, first in one direction, then in another, with true indistinctness of vision; though there could not be any doubt but that she saw slightly better with the right than the left eye, and just so much better as a comparatively freer arterial supply would account for.

There could, then, be little hesitation in deciding that the case was one of aneurism, and I had little misgiving but that it was in the situation I have stated I thought it was. But, before operating, I said that I should consider somewhat sudden increase of the paralysis of the external rectus muscle, if followed by its gradual and perfect recovery, as this patient improved and time rolled on, to be perfectly confirmatory of the correctness of my opinion; the view I took being, that the existing slight paralysis of the left external rectus muscle was caused by pressure on the sixth nerve, as it crossed the artery, by a small aneurismal tumour, containing principally fluid blood; but that, when the common carotid should be tied, then a clot would form in the tumour, producing harder and firmer pressure on the nerve, and consequently more marked paralysis of the external muscle; and that, as the clot diminished in size, and became absorbed, the pressure would be taken off the nerve, and it would then resume its functions. The after history of the case, as you have heard by the notes, fully bore out this idea.

In reference to the substitution of a gentle almost continuous murmur immediately after ligaturing the vessel, for the loud whizzing sound previously existing—the substitution being recognized by the patient, and by those present at the operation—it was caused, I presume, by a continuance of the passage of blood, but with diminished force, into the tumour by means of the circle of Willis. At 4 P. M. of the day of the operation, and about five hours after it, this murmur could no longer be heard either by the patient or myself; and was succeeded in its turn by a crackling noise in the vicinity of the ear, audible only to the patient: this quickly ceased.

In addition to the positive evidence afforded by the symptoms in this case, everything that is known of the pathology of the cerebral vessels, in persons of the age of this patient, tends to show the probability of such a lesion occurring under the circumstances in which this woman was placed. I allude to Paget's researches on fatty degeneration of the coats of the cerebral arteries; Virchow's remarks on aneurismal dilatation of the same vessels, caused by paralysis of their muscular coat; to Rokitaneky's general investigations on the effects produced by thrombotic deposit on and degeneration of the inner arterial tissues; those effects being either ruptures of those tissues and dilatation of the cellular coat, or laceration of all the coats.

Finally, there are records of this discovery, *post-mortem*, of aneurism of the internal carotid artery in the cavernous sinus. Romberg, in his work on *Diseases of the Nervous System*, gives in *extenso* the history of a most horrible case of facial neuralgia of the left side, which was ascertained to depend in great degree on pressure of the Cisterian ganglion of the same side by an aneurism of the left carotid artery in the cavernous sinus. In 1836, there was published at Berlin a dissertation by Stumpf, *De Aneurysmatibus Arteriarum Cerebri*. In this he gives two cases of aneurism affecting the internal carotid artery in the cavernous sinus. I have been unable to procure the original dissertation, and only quote from memory a reference made to it.—*Assoc. Med. Journ.*, Nov. 30, 1855.

46. *Aneurismal Varix transformed into a False Consecutive Aneurism, and cured by compression.*—This extremely enrious case relates to a patient who applied to Professor NÉLATON, under the following circumstances: Three or four months previously he had been bled, and from the operation had resulted a wound of the artery and of the vein, by which an aneurismal varix, perfectly recognizable at the time of his admission into hospital, had been established. On the first view of the case, Professor Nélaton called the attention of his hearers to this patient, hinting at the possibility of a cure by the transformation of the lesion into a false consecutive aneurism, by the following means:—In a particular point of the aneurismal tumour, a bruit de souffle was heard much more marked than at any other point. If the walls of the vein were strongly compressed with the finger, the characteristic continued bruit de souffle disappeared, and was replaced by the intermittent bruit de souffles pathognomonic of false consecutive aneurism. This circumstance suggested to M. Nélaton the idea that it might perhaps not be very difficult to modify the lesion by means of compression.

He accordingly had a compressor constructed, which, in spite of all the modifications made in it, did not answer the purpose; in this region, we may observe, in passing, compression is extremely difficult. In consequence, it occurred to him to resort to a method which has often succeeded in America—namely, digital compression effected by the fingers of assistants who continually relieve one another. Twelve pupils, volunteers, were enlisted and appointed to keep up the compression for two hours each.

During the first twenty-four hours the compression was borne by the patient without much complaint. During the next twenty-four it was much less tolerable. Finally, at the end of forty-four hours, the patient declared that he could no longer submit to it, so much suffering and inconvenience did it occasion. In addition, the hand was greatly swollen, livid, and rather cold. It was absolutely necessary to discontinue the compression. At the time it was left off, no very remarkable improvement was observed, and yet, from that moment, the state of things completely changed.

Mechanical compression by means of instruments was resumed, and immediately gave a different result from what had formerly ensued. The tumour diminished; the indication was clearly to keep up the pressure, which was done. By degrees its volume became less, and at the end of some weeks only a small, hard, and compact tumour of the size of a large filbert was perceptible in the situation formerly occupied by the aneurismal sac. There was no doubt of the completeness of the cure.

M. Nélaton has not seen this patient again for about a month, but he has not the least doubt as to the cure of the aneurismal tumour, and he has during the last few days called the attention of his pupils, at considerable length, to the possibility of transforming aneurismal varix into false consecutive aneurism, a fact which was not suspected six or seven years ago, and which is nevertheless not very uncommon. In two years Professor Nélaton has met two cases similar to that now described; both of which terminated as favourably.—*Dublin Med. Press*, Jan. 23, 1856, from *Presse Méd. Belge*, Jan. 3, 1856.

47. *Cases of Entrance of Air into a Vein—Recovery.*—Two cases in which it seems almost certain that air entered a vein during operations, are recorded in a recent number (Feb. 16, 1856) of the *Med. Times and Gaz.* The first case occurred at the London Hospital, under the care of Mr. Ward. The subject of it, Mary Ann Boffee, aged 10, a healthy girl, was admitted under Mr. Ward's care, on account of congenital wry-neck. The face looked towards the left shoulder, and the head was drawn down towards the right; the right sternocleidomuscle being rigidly contracted. It was determined to divide the tendon of origin of the affected muscle, the deformity being plainly due to its organic shortening. The operation was performed in the usual way, a narrow bladed knife being passed behind the tendon and made to cut its way forward. Both the sternal and the clavicular attachments were divided, and on the section being completed a very profuse gush of venous blood took place. At the same time, a loud hissing or sharply-blowing sound was heard. The patient, who

was in the sitting posture, and not under chloroform, at once fell back insensible, and, with the exception of lividity of the lips, became deadly pale. It was questionable whether or not the pulse could be felt, but if not quite extinguished, it was all but so. The event occurred just as the knife was being withdrawn, and when consequently the wound was held in some degree open. The withdrawal of the knife was at once completed, and the finger placed upon the wound. The child having been laid on her back, artificial respiration was immediately commenced. The state of insensibility did not last more than a minute or two. The pulse in a short time returned, and the respiration began to be performed voluntarily. Within a few minutes the child had quite recovered. No subsequent ill symptoms whatever occurred.

Mr. Ward stated, in respect to this case, that from the peculiarity of the sound produced, and suddenness with which the alarming symptoms followed, he could not feel a doubt as to the nature of the accident. For a short time the child appeared dead, and had not prompt measures for her restoration been taken, it is not improbable that a fatal result would have ensued. The next case to be related, is one in which it was believed that the same accident happened, though the evidence was less positive.

The second case occurred at the Metropolitan Free Hospital, under the care of Mr. Hutchinson. Mary Plainstow, aged 56, a thin, cachectic woman, was admitted on account of a large ulcerated cancer of the right breast. There was also a glandular lump in the axilla, about the size of a walnut. The operation for the removal of both these tumours was conducted under the influence of chloroform. The breast itself was first excised, and, from the large size of the wound necessarily made, some loss of blood was incurred. The gland was found to have more deep adhesions than had been expected. Its removal was effected partly with the finger and partly with the knife, the arm meanwhile being held straight out from the chest. Just as its deep attachments in the apex of the axilla had been divided, a whizzing, hubbbling, very peculiar, noise was heard, which suggested to those present the idea of air entering a vein. At the same time there was considerable venous bleeding, but not, as it seemed, from any one vessel in particular. Mr. Childs, who was assisting, instantly placed his finger over the spot whence the sound proceeded, and the arm was lowered to the side, upon which the sound ceased. The patient was at the time lying quite flat on her back, and was so pale from the combined influence of chloroform and loss of blood, that no indications could be obtained from her countenance. The pulse was as feeble as it well could be, but it did not cease; and respiration, although irregular, continued to be performed. After waiting a few minutes, the arm was again lifted from the side, and the finger removed, and again the peculiar whizzing was heard. The finger having been instantly replaced, no further delay took place, but no symptoms supervening, after a short time, all pressure was removed, and ligatures were placed on each vessel as required. It did not appear that any large vein had been wounded, as there was no material bleeding, except from the small arteries. With the employment of brandy, &c. the woman rallied well after the operation; and excepting that throughout the day she continued to complain of painful shortness of breath, and sense of constriction about the chest, no symptoms which could be referred to the supposed accident developed themselves. She made a good recovery.

Although but little doubt was felt at the time by those present as to the nature of the accident which had occurred, yet it must be admitted that the proof is not conclusive. The circumstance that the patient was in the recumbent posture, and already in a state of insensibility, and almost of collapse, probably prevented the usual train of symptoms from being apparent. The but small loss of blood which occurred is no reason for believing that a vein sufficiently large to have admitted air had not been opened, since, in several of almost instantaneously fatal cases on record, no gush of blood was observed.

48. *On Congenital Deficiency of the Palate, and the Means to be used for its Relief.*—GEORGE POLLOCK, Esq., read a paper on this subject before the Royal Medical and Chirurgical Society, January 22d, 1856. He stated that his objects

were not so much the relation of a new operation for the closure of the imperfect hard palate (although various novel operative procedures are explained in the course of it), as to draw attention to the fact, that few exceptions exist in which the fissures of the hard palate cannot be effectually and permanently relieved by operation—a fact which, for various reasons cited, appeared to have been much neglected by English surgeons. Mr. Pollock's paper was admirably illustrated by a great many models and drawings of the parts concerned, both previous to operation and during the different stages of the treatment of the cases related. The author divided the different conditions of deformity affecting the hard palate into six groups.

1. The first and most extensive fissure extending through the soft and hard palate—and then dividing in front, passes through the alveolar ridge, making a gap on each side of the incisor teeth.

2. The second extends through the soft and hard palate, and through the alveolar ridge also, by a single gap only, on one side of the incisor teeth. The author had always found congenital fissure of the upper lip associated with fissure, either double or single, of the alveolar ridge; and that when the latter is double, the former was so also.

3. The third passes through the soft and hard palate, and terminates in front immediately behind the alveolar ridge. In this variety, there is often great irregularity of the upper incisors. This group of cases is also accompanied by congenital fissure of the lip.

4. The fourth extends through the soft, and about three-fourths of the hard palate.

5. The fifth extends through the soft palate and the palate bone only.

6. The last exists as an opening in the hard palate, and the soft may be entire.

Upon this classification, Mr. Pollock laid down the principle that the more extensive the deformity, the more extensive the surface of the soft tissue, and the greater, therefore, the facility of bringing the edges of the fissure together, and the greater hope of ultimate success. He gave various admeasurements of the parts, in different degrees of deformity, all tending to prove that the lesser the fissure in the hard palate, the more natural will be the curve of the arch, a condition which is found to add to rather than diminish the difficulties of the operation; for although, in such cases, the soft parts may be readily separated from the bone, yet they will rarely be sufficiently broad or free to meet in the median line without traction, or a resort to some other operative measures; whereas, in the greater degrees of deformity, the sides of the fissure run upwards, in a direction almost perpendicular, and thus afford a larger surface from which to obtain soft parts. Several cases were next related from the author's own practice, and from that of the late Mr. Avery, to whom Mr. Pollock paid a well-merited tribute of respect and regard. In the relation of the cases, and the sequel of the paper, the following points were insisted upon: The line of the first incision of the edges of the cleft ran along the line of union between the mucous membrane of the mouth and that of the nose. It is made with a knife, consisting of a flat piece of steel, bent at a right angle, about a quarter of an inch from the extremity, the cutting edge of which is about an eighth of an inch broad in the centre, and rounded off narrower to each end; a much broader knife, of the same character, is used to detach the soft parts from the bone, an operation requiring great care, to avoid lacerating and bruising them. Knives bent at various angles are required for various parts of the mouth, and one was recommended, the blade of which should be acted on by a screw; they should be strong and firm, and as broad as can conveniently be used. The edges, when detached, should never be brought together by sutures, unless they fall and meet together without traction. The author advocated the introduction of a suture through each of the corners of the newly detached palate, as preferable to the use of forceps, when manipulating them. The ends of the sutures are brought out of the mouth, and tied in a knot, so that there may be no fear of their being withdrawn, and thus the flaps can be raised or moved about without fear of bruising or lacerating the edges, one of the most

frequent causes of failure of union. When the flaps or curtains do not meet of their own weight in the mesial line, a curved knife is introduced through the palate, near the last molar tooth on each side, and pushed upwards and inwards between the bone and soft parts, until its point is seen in the fissure, when the blade is moved slightly backwards and forwards. Lateral incisions may also be required. The author strongly insists on the propriety of not attempting too much at once, and for these reasons: The separation of a large surface greatly interferes with its nutrition; both anterior and posterior palatine arteries would be divided at the same time, and sloughing rendered thereby probable; the length of the operation, and consequent fatigue and pain to the patient. The author prefers to operate upon the hard palate first, because the anterior palatine artery being usually divided in that procedure, the flaps obtain ample nourishment from the posterior palatine vessels; and again, firm union of the new-formed palate is usually followed by a sensible diminution in the breadth of the fissure of the soft palate. Again, it is the more tedious and painful operation of the two. In operating on the soft palate, the author advocates a novel mode of dividing the levator palati muscle. The flap being put on the stretch by the traction of the suture above mentioned, a sharp pointed, double-edged knife is run through the side of the palate, on the inner side of the right buccular process, which can be readily felt through the soft parts. The point being kept in a direction upwards and inwards, is soon seen to have passed through the soft palate, and projecting into the gap of the fissure above the line of the levator. The handle is next raised, and a sweeping cut made along the posterior surface of the soft palate. The knife, being withdrawn, leaves but a small opening in the mucous membrane, and the levator is found to be freely divided. If this proceeding do not sufficiently liberate the curtain, the incision may be carried down to the free margin of the soft palate. Sutures should never exert the slightest traction or pressure. Their removal, of course, will depend on the circumstances of the case; but usually the first may be removed on the third or fourth day. After the operation, fluid or pulpy food should be given liberally; it is very important to insist on this, as the patient will otherwise be deterred by the pain of swallowing. Whiteness and coating of the tongue, after operation, are not to be considered indications for the administration of physic; nor are various conditions of the tongue and fauces previous to operation, and which are due to the absence of the hard palate, to be regarded as indications of defective general health; the latter, however, should always be perfect at the time of operation. The operator upon the hard palate is not to be discouraged by failure in gaining union at first, for parts which were thin and scanty, are often rendered thicker and more vascular by separation from their attachments. When attempts are made to close an aperture in the palate, caused either by malformation or disease, after paring the edges and separating the soft tissues from their attachments, lateral incisions are frequently necessary; and great general support may be given to the sutures used below the wound, by passing a broad suture through the lateral incisions, and thus including both flaps within its embrace. And this is not its only effect; it prevents the healing of the lateral incisions until the opening has had time to unite. Its use is preferable to that of sponge or lint introduced into the wounds. As chloroform is not applicable to these operations, a degree of self-command and endurance is required, which cannot be expected in an individual under the age of seventeen or eighteen, at which period also the development of the parts affected may be presumed to be nearly completed. Mr. Pollock suggests, in conclusion, that although in all cases in which operative procedure has been attended with success a great improvement has invariably been noticed in the speech and articulation, yet much remains to be done by education. Efforts must be made to change the acquired habit of pronunciation for a new method of articulation, which may be best and easiest effected by the patient repeating words after a teacher, or reading aloud, subject to correction. Difficulties in this respect will, however, often be found to depend upon the fissure in the alveolar ridge, or irregularities of the teeth.—*Med. Times and Gaz.*, Feb. 2, 1856.

49. *Congenital Fistula of the Neck.*—Dr. J. M. DUNCAN records (*Edinburgh Med. Journ.*, Nov. 1855) the following example of this rare condition, to which attention has been latterly drawn by Dizoni, Ascherson, and Rathke. E. A., a boy, æt. 16, of a delicate constitution, has, about a line and a half above the insertion of the external tendon of the right sterno-mastoid muscle, a reddish spot, scarcely as large as an ordinary pin-head, having in its centre an opening, almost imperceptible to the naked eye. Every day, as far back as he can remember, a little whitish viscid fluid has come away from this spot. The ordinary condition of the spot is to be covered with a small scale of the dried secretion. About a drop of this secretion occasionally issues spontaneously in the course of the day. This, when dried on the shirt, has the appearance of a yellowish spot of dried albumen. Most of the fluid is brought away at night, and, occasionally, else in the morning, at which time he is wont to empty the fistula by pressing his finger along the neck, from above downwards, between the sterno-mastoid and trachea, with a milking-like motion. At such times, the quantity discharged is equal to many drops. On examination, this secretion is found to consist of a viscid fluid, containing numerous large mucous globules. He has never observed anything but this fluid come from the aperture, nor can he, by closing the mouth and nostrils, and making a violent expiratory effort, force any air from the mouth through the fistula.

His mother states that the little orifice attracted her attention almost immediately after his birth, in consequence of stringy mucus being found adhering to the spot. Whenever he sucked, the pure milk flowed drop by drop from the orifice.

50. *Use of Potassa Fusa in the Local Treatment of Boils and Carbuncles.*—Mr. BENJAMIN TRAVERS, in an interesting paper (*Med. Times and Gaz.*, Jan. 12, 1856) on this subject, does but justice to our eminent countryman, the late Prof. Physick, of Philadelphia, for introducing into practice the use of potassa fusa in the treatment of carbuncle.

Mr. T. has been induced to make these remarks in consequence of having seen "a succession of well marked instances of the great advantage to be obtained by the use of a powerful caustic like the 'kali purum,' in securing the safe and far more speedy convalescence of those who are suffering under the above disorders, at any period of life:" he says, "it is only of late, and, indeed, even now but to a very limited extent, that the surgeons of this country have begun to appreciate the great superiority of this method. This is not surprising when we see to what an extent the idea has been discouraged by writers even of our own day. Their objections, however, are unreasonable and unscientific, and they have been advanced by those who knew nothing whatever of the effects of this practice in an experimental point of view, or as a matter of personal experience. In what has been termed the second stage of these collections, provision must be made by means of an artificial opening for the escape of the dead matters beneath the strained and spoiled integument, which in its turn must surely die, albeit more slowly, and to a more limited extent. It should be borne in mind that we are not here dealing with a texture which has undergone the attenuation consequent upon an interstitial removal, but that the parts are already condemned, and will infallibly die to a limited extent, since they are the seat of a mode of inflammation having a very different extent from that which determines the progress of a common acute abscess. Such a collection, when ripe, we prick or cut, in strict submission to and observance of a natural law. For an equally good reason we ought not to cut boils and carbuncles. For the present I must not enlarge on this head, but content myself with observing that besides the anomaly implied in cutting and wounding a mass of inflamed tissue already disposed to die from excessive irritation, the risk of a fatal hemorrhage so incurred is by no means an imaginary accident. The subsequent low rate of healing after the use of the knife constitutes another most grave objection to its employment. Dr. Physick, of Philadelphia, has, in my opinion, established an undivided claim to the merit of having first used the caustic potash, with a scientific view, in the treatment of carbuncle. (*Vide Philadelphia Journal of*

Medical and Physical Science, vol. ii.) He was the friend and pupil of John Hunter, and certainly the most distinguished man of his time in America. He died so lately as the year 1837, and has been called the Father of American Surgery. (*Vide* 'A Memoir,' etc., by J. Randolph, M. D., Philadelphia, 1839.) Dr. Physiek says, 'that the suffering ceases as soon as the pain of the caustic has subsided.' I cannot do justice to the importance of this observation in a communication like the present, but I possess, and, indeed, am constantly accumulating fresh evidence of its truth, both as regards boil and carbuncle. M. Maunior, of Geneva, the celebrated ophthalmic surgeon, strongly advocated this practice. Indeed it needs but a patient trial to convince the least credulous of its extraordinary efficacy."

Mr. Travers relates four cases demonstrative of the superiority of caustic to the knife.

51. *Treatment of Hospital Gangrene, and of Wounds in General, with Glycerine.* By M. DEMARQUAY.—Last year, M. Cap published two memoirs on glycerine, in which, after having described its physical and chemical properties, he endeavoured to show what useful applications might be made of it in medicine and pharmacy. Many distinguished practitioners in England and France have employed it in the treatment of several medical affections; but it has hitherto been neglected by the surgeon. However, reflecting on the physical and chemical properties possessed by this substance, it appeared to me that it might be of some use in dressing wounds. Accordingly, I lost no time in turning my sojourn at the Hôpital Saint-Louis to account by making some trials with it under Professor Denonvilliers. Some of the patients whom I had to treat having been attacked with that severe complication of wounds, hospital gangrene, I first made use of the active measures with which this affection is usually combated, namely, citric acid, nitric acid, and the actual cautery, but in vain. I then had recourse to glycerine, and in twenty-four hours the wounds of the sufferers had changed their appearance, the fever gave way, and a cure was speedily accomplished.

Struck with these facts, as were all those connected with the hospital, I resolved to continue my researches, and to apply glycerine to the treatment of ordinary wounds. Consequently, all the wounded in the hospital were dressed with glycerine, and the following are the results so obtained:—

Wounds submitted to this mode of dressing have a florid colour, and continue so clean that washing and the recourse to the spatula to remove the cake of cerate and pus, which renders the present mode of dressing wounds so tedious and painful, can be dispensed with. Folds of linen smeared with glycerine are removed with the greatest facility; and, besides, this substance moderates the suppuration, as I have ascertained in the cases of a number of patients, who, before the employment of the new dressing, had been using the cerate. The granulations, too, are not redundant, and consequently do not require to be kept down by the application of caustic.

To these advantages, we may add that the dressings are rendered soft and agreeable to the patients, while the cicatrization of the wounds is remarkably promoted. All these circumstances have been verified by Professor Denonvilliers, and it is with the support of his name that I have the honour to bring forward the results of my researches.

The manner of applying glycerine in dressing wounds is extremely simple. A fold of perforated linen, dipped in the fluid, is placed over the wound so as fully to cover it; a little lint is applied over the linen, and the entire is covered with a compress and bandage. The next day the linen can be removed without pain, and the wound appears florid, clean, and scarcely covered with pus.—*Dublin Med. Press*, Dec. 5, 1855, from *Presse Méd. Belge*, Nov. 25, 1855.

52. *Treatment of Salivary Fistula.*—The plan which is here described is recommended by its simplicity as well as by the success which attended its employment. It ought, at least, to have a fair trial before having recourse to severer measures.

Case.—A man æt. 28, strong and healthy, was operated upon, in July, 1853,

for a cyst in the course of the duct of Steao. Three days afterwards, saliva was found to escape from the wound.

First of all, careful pressure was made with small pledgets of lint. The result of this treatment was, that a painful and red swelling formed in the neighbourhood of the parotid gland. Attempts were then made to close the wound with a silver needle and a twisted suture; but this plan did not answer, and after four days the saliva escaped freely from the punctures made by the needles. After this a steel contrivance was used; which kept the edges of the wound in contact throughout their whole extent, but this the patient could not bear.

M. RUDOLFI next hethought himself of collodion. He carefully dried the edges of the fistula, and applied two drops of the solution, which presently dried up, and left the part covered with an artificial cuticle. The day following, he thickened this pellicle by dropping more collodion upon it, and so on the next day and the day following; and the end was, that in eight days the patient was perfectly well, the fistula having been closed from the time of the first application of the collodion.—*Ranking's Abstract*, vol. xxi., from *Gaz. Med. de Paris*, Dec. 16, 1854, and *Gaz. Med. Ital.*, 1854.

53. *Case in which a Cedar Pencil was lodged in the Cavity of the Abdomen for Eight Months.*—This case was communicated to the Royal Medical and Chirurgical Society by Prof. ERICHSEN. In September, 1854, the patient, a young woman aged 28, being suddenly surprised while in the act of endeavouring to pass a pencil for the relief of some difficulty in micturition, allowed it to slip out of her hand. On sitting down shortly afterwards, she was seized with acute stalling pains in the lower part of her abdomen, and although careful search was made by a medical man soon after the accident, no trace of it could be discovered. Frequent attacks of peritonitis followed the accident; and when she was seen by Mr. Erichsen, in May last, she was much emaciated and debilitated from that cause, as well as the constant severe pain in the abdomen, attended with vomiting and retching, which she suffered. There were no symptoms referable to the bladder, nor any pain in defecation; blood was occasionally passed per anum, but was attributed to piles, from which she had previously suffered. Upon examination, the point of the pencil was felt distinctly projecting just beneath the integuments of the abdominal wall on the right side, about midway between the umbilicus and Poupart's ligament; it was movable, could be pushed backwards, but returned to its original position when pressure was removed. The finger passed into the vagina or rectum detected the pencil, through the walls of those organs, lying across the body in a direction from before backwards, the blunt end of it being lodged in the hollow of the sacrum; it was beyond reach of the finger, but pressure upon that part of it through the rectum caused the point to become more distinct in the abdominal wall in front. Under these circumstances, an incision was made by Mr. Erichsen through the anterior abdominal wall, until the leaden point of the pencil was discovered forced through the fasciæ transversalis, the pencil being at the same time caused to project upwards and forwards by an assistant pressing deeply in the rectum. The wound being slightly enlarged, the pencil was extracted; it was five inches and a half long, and the point was still perfect; it had separated into its two halves. It was marked by three broad bands, indicating that it had passed through two coils of intestine; but no flatus or feces, however, followed its extraction. Severe peritonitis followed, and the patient died on the fourth day after the operation. *Post-mortem* examination proved that the pencil had been forced through the upper and posterior vaginal cul-de-sac, close by the side of the uterus, and then through two coils of the ilium, a mass of which, about the size of the fist, was found glued together by old and recent lymph, lying about midway between the umbilicus and pubes, to the right of the mesial line.—*Med. Times and Gazette*, Dec. 22, 1855.

54. *Rupture of the Spleen from External Violence, followed by Pleuro-pneumonia and Death.* By DR. DUFFIN.—Thomas Powell, æt. 21, a soldier of the 57th

regiment, was admitted into hospital on the 8th of September. The day of the final attack upon the Redan, he was in the trenches, and was hit on the left side by a piece of shell. I saw him at the time, and ordered him to be taken to our field-hospital in camp. He walked the whole of the way; when on his arrival he was further examined by Dr. Macandrew, the surgeon of the regiment. At the time he was suffering from severe pain in the left side, which was augmented by pressure over a circumscribed space, corresponding to a point a little external to the cartilage of the ninth rib, and not more than three inches in circumference: anxiety of countenance and accelerated pulse, but no abrasion on the surface—an fractured rib—no swelling or discoloration of the part. He was treated for the symptoms, and discharged two days after, viz: on the 10th, at his own request, and to all appearance quite well. He returned to his duty, which he performed as usual, until the 12th, when he was readmitted under my care, labouring under the following symptoms: General increased heat of the surface of the body; pain, of a violent character, in the small space, already referred to, with very intense heat; hard and quick pulse; tongue covered with a whitish fur. The stethoscope revealed a slight crepitus at the base of the left lung; rather difficult breathing; and very deep inspiration, evidently causing pain: the epigastric region was distended, and the whole abdomen tympanitic. Percussion gave a clear and normal sound over both lungs.

Treatment.—He was bled from the arm till syncope was produced; subsequently twenty leeches were applied to the painful part; calomel, antimony, and squills were given; salivation was produced rapidly, and the action of the mercury kept up until the 25th. This was the chief treatment. He died on the evening of the 26th, in an agonizing state. For several days he seemed to be improving, and could talk with ease and freedom from pain; but on the 20th the crepitus in the left side, at first very indistinct, became quite audible, and extended over the greater part of the same side, even over the pericardium. Pressure at no time gave pain, except in the one small spot.

Post-mortem Examination.—The pleura of the left side were throughout their whole extent highly vascular, particularly the costal, and in lower part of the side numerous small vessels of lymph were plainly visible to the eye; there was no decided thickening, except at those points. The pleura were united by a few soft shreds of lymph: a small patch of the base of the left lung was congested; in other respects both lungs were healthy, though much contracted in size. The pleura costalis and pulmonalis of the right side were united by numerous bands of recently effused lymph, yet no other trace of inflammation was present. The cellular tissue of the anterior mediastinum was congested; the pericardium contained a large quantity of serum, but in it there was no vascularity; the small capillary vessels, on the surface of the heart, were plainly seen, and presented a beautiful network appearance. The peritoneum throughout its entire extent was of an almost perfectly black appearance, as well that of the parietes as of the intestines; the omentum was, likewise, black, but in no other respect did the peritoneum differ from its healthy character. It was still glistening, tense, and elastic. The stomach and intestines were greatly distended with gas. The spleen was of about three times its ordinary size, ruptured to the extent of two inches in its long axis, and to a considerable depth in its anterior and external aspect; its substance was infiltrated with congealed and black blood; the vessels entering and leaving were uninjured. There was no fractured rib, no laceration of the parietal peritoneum. The liver was healthy, nothing abnormal apparent about it.—*Dublin Hospital Gazette*, Nov. 1, 1855.

55. *Mode of Testing the Translucency of Hydrocele.*—Dr. W. FRAZER directs attention (*Dublin Hospital Gazette*, Nov. 1, 1855) to what he believes to be one of the best methods of employing the valuable test of translucency in hydrocele, a test which is practically as important as a differential diagnostic in discriminating between mere serous effusions in the cavity of the tunica vaginalis and various affections of the testicle, or scrotal hernias. Of course, every one is aware that the test is not free from objection; thus, it is almost or entirely

useless in those instances in which the effused fluid is of very dark colour, or is mixed with blood, &c., and also whenever the tissues of the tunica vaginalis are of unusual thickness, or are the seat of cartilaginous or osseous deposit, or when they are coated internally by the products of previous inflammatory action. Independent of these exceptional cases, there are a number to be met with in practice, in which the test is of value.

As ordinarily employed, by placing a candle at one side of the tumour, and excluding the passage of the light laterally by means of the hand, it is, at best, a clumsy proceeding, and liable to errors. I have found the stethoscope much more useful, as a means of excluding the diffused light, and by applying the eye to its expanded bell-shaped portion—the ear-piece being firmly placed upon the scrotum, held in a tense condition—we can even map out the state of the parts with tolerable accuracy, if the contained fluid be of ordinary character, and detect the position of the testicle by the opacity it produces, especially when it occupies any unusual locality, as the front or sides of the scrotum, or is adherent from inflammation after previous tapplings. We can employ either a lighted candle or bright sunlight, as our best means of obtaining the requisite illumination; but even in diffused daylight I have succeeded very well in the manner I mention.

OPHTHALMOLOGY.

50. *Black Cataract*.—M. HAYNES WALTON communicated to the Royal Medical and Chirurgical Society (Nov. 27, 1855), the following curious case: A man, aged 75 years, had lost the sight of both eyes for several years, and whose symptoms, objective and subjective, were: The cornea and sclerótica were healthy; the irides bright and in their natural planes. The pupils were of ordinary size, and acted but slightly, even when submitted to a bright light. The anterior chambers were large. In the left eye there was the ordinary coloured cataract of advanced life, not, however, very opaque. With this eye he could see the outline of his hand or any large body. The first symptoms developed themselves in 1849, when the late Mr. Dalrymple was consulted, and gave it as his opinion that incipient cataract existed. In October last, Mr. Walton was consulted, when the remarkable blackness of the right pupil attracted his attention. By the aid of a strong solution of n tropine to both eyes, and the use of the ophthalmoscope, he saw in the right eye a cataract of a very deep-brown colour, uniform over its entire surface, being without striae or markings of any kind. By the aid of the sun's rays, concentrated by a powerful lens, it was more discernible. Mr. Walton considers this mode of examination superior to the ophthalmoscope. The opinions of Mr. Lawrence, Dr. Mackenzie and Mr. Tyrrell were quoted by the author in support of the rarity of this peculiar form of cataract.

Mr. TAYLOR, having had an opportunity afforded him of examining the case, confirmed the accuracy of Mr. Walton's description. When undilated, the pupil was of an intense black, like that of a child; not even when fully dilated was there an opacity visible, until a strong light was thrown on it by means of a lens. Then there was no difficulty in seeing the opacity, which was of a very dark-brown colour, and to him (Mr. Taylor) appeared to be situated in the nucleus of the lens, the superficial layers being little if at all affected.

Mr. DIXON had seen one case, and only one, of absolutely black cataract. Some years ago, he put on record that black cataract never existed, and soon after, as if to spite him, one of his colleagues extracted one. Several cases had been recorded, all presenting similar appearances. He might refer to those found by Stallweg, and taken from the dead subject, in which multitudes of black granules were found interspersed between the fibres of the lens and in the substance of the fibres. Another, as examined and exhibited before the Société Biologique, in Paris, by Blot, had the same characters as those before